

# Publications

- Abdurashitov, J. N., Gavrin, V. N., Kalikhov, A.V., Matushko, V. L., Shikhin, A. A., Yants, V. E., Zaborskaia, O. S., Adams, J. M., Nico, J. S., Thompson, A. K., "A High Resolution Low Background Fast Neutron Spectrometer," in Nuclear Instruments and Methods, in press.
- Adams, C. P., Lee, Y. S., Lee, S.-H., Lynn, J. W., "Triple-Axis Research at NIST," *Neutron News* **12** (2), 15 (2001).
- Adams, C. P., Lynn, J. W., Mukovskii, Y. M., Arsenov, A. A., Shulyatev, D. A., "Charge Ordering and Polaron Formation in the Magnetoresistive Oxide  $\text{La}_{0.7}\text{Ca}_{0.3}\text{MnO}_3$ ," *Phys. Rev. Lett.* **85** (18), 3954 (2000).
- Adams, J. M., "Results From the NIST Round Robin Test of Fissionable Dosimeters in a Reactor Leakage Spectrum," *REACTOR DOSIMETRY*, in *Proceedings Radiation Metrology and Assessment*, ASTM STP 1398, edited by J. Williams, D. Vehar, F. Ruddy, D. Gilliam, (ASTM, West Conshohocken, PA, Feb. 2001), p. 295.
- Adams, J. M., Greenhouse, L. A., "Nuclear Science at the National Institute of Standards and Technology: A Historical Overview," *Transactions of the American Nuclear Society, November 2000*, (Washington, DC), **83**, 492 (2000).
- Akpalu, Y. A., Karim, A., Satija, S., Balsara, N. P., "Suppression of Lateral Phase Separation in Thin Polyolefin Blend Films," *Macromol.* **34** (6), 1720 (2001).
- Allen, A. J., Ilavsky, J., Long, G. G., Wallace, J. S., Berndt, C. C., Herman, H., "Microstructural Characterization of Yttria-Stabilized Zirconia Plasma-Sprayed Deposits Using Multiple Small-Angle Neutron Scattering," *Acta Mater.* **49** (9), 1661 (2001).
- Allen, A. J., Long, G. G., Boukari, H., Ilavsky, J., Kulkarni, A., Sampath, S., Herman, H., Goland, A. N., "Microstructural Characterization Studies to Relate the Properties of Thermal Spray Coating to Feedstock and Spray Conditions," *Surf. Coat. Techn.*, in press.
- Allman, B. E., McMahon, P. J., Nugent, K. A., Paganin, D., Jacobson, D. L., Arif, M., Werner, S. A., "Phase Radiography with Neutrons," *Nature* **408**, 158 (2000).
- Amos, T. G., Sleight, A. W., "Negative Thermal Expansion in Orthorhombic  $\text{NbOPO}_4$ ," *J. Solid State Chem.*, **160**, 230 (2001).
- Anderson, C. R., Andersen, K. H., Stirling, W. G., Sokol, P. E., Dimeo, R. M., "Dynamics of Superfluid  ${}^4\text{He}$  Confined in Xerogel Glass," *Phys. Rev. B*, in press.
- Anderson, D. L., Capar, S. G., "Identification of Lead in Metal Food Can Seams Using  ${}^{57}\text{Co}$  RXRFS," *J. Radioanal. Nucl. Chem.* **249** (1), 77 (2001).
- Anderson, D. L., Cunningham, W. C., "Revalidation and Long-Term Stability of National Institute of Standards and Technology Standard Reference Materials," *J. AOAC International*, **83** (5), 1121 (2000).
- Anderson, D. L., Cunningham, W. C., Capar, S. G., Baratta, E. J., Mackill, P., "Nuclear Methods for Food Analysis at the U. S. Food and Drug Administration," *J. Radioanal. Nucl. Chem.* **249** (1), 29 (2001).
- Bao, W., Aepli, G., Lynn, J. W., Pagliuso, P. G., Sarrao, J. L., Hundley, M. F., Thompson, J. D., Fisk, Z., "Anisotropic Three-Dimensional Magnetic Fluctuations in Heavy Fermion  $\text{CeRhIn}_5$ ," *Phys. Rev. Lett.*, in press.
- Bao, W., Christianson, A. D., Pagliuso, P. G., Sarrao, J. L., Thompson, J. D., Lacerda, A. H., Lynn, J. W., "Effect of La-Doping on Magnetic Structure in Heavy Fermion  $\text{CeRhIn}_5$ ," *Physica B*, in press.
- Bao, W., Pagliuso, P. G., Sarrao, J. L., Thompson, J. D., Fisk, Z., Lynn, J. W., "Magnetic Structure of Heavy Fermion  $\text{Ce}_2\text{RhIn}_8$ ," *Phys. Rev. B* **64** (2), 0401 (2001).
- Bao, W., Pagliuso, P. G., Sarrao, J. L., Thompson, J. D., Fisk, Z., Lynn, J. W., Erwin, R. W., "Incommensurate Magnetic Structure of  $\text{CeRhIn}_5$ ," *Phys. Rev. B* **63** (21), 9901 (2001).
- Bateman, F. B., Boukharouba, N., Brient, C. E., Carlson, A. D., Grimes, S. M., Haight, R. C., Massey, T. N., Wasson, O. A., "New Measurements of the  $H(n,n)H$  Angular Distribution," *REACTOR DOSIMETRY, Radiation Metrology and Assessment*, ASTM STP 1398, edited by J. Williams, D. Vehar, F. Ruddy, D. Gilliam, (American Society for Testing Materials, West Conshohocken, PA, Feb. 2001), p. 431.
- Bauer, B. J., Amis, E. J., "Characterization of Dendritically Branched Polymers by SANS, SAXS, and TEM," *Tomalis/Frechet: Dendritic Polymers*. 2000, in press.
- Bauer, B. J., Lin, E. K., Lee, H. J., Wang, H., Wu, W.-L., "Structure and Property Characterization of Low-k Dielectric Porous Thin Films," *J. Electron. Mater.* **30** (4), 304 (2001).
- Becker, P. R., Mackey, E. A., Demiralp, R., Epstein, M. S., Donais, M. K., Goessler, W. A., Porter, B. J., Wise, S. A., "Heavy Metals and Other Trace Elements Measured in Tissues of Marine Mammals Archived by the Alaska Marine Mammal Tissue Archival Project from the Bering Sea and Cook Inlet, Alaska," in *Proceedings of The AMAP Heavy Metals Workshop*, in press.
- Becker, P. R., Pugh, P. R., Schantz, M. M., Mackey, E. A., Oflaz, R. D., Epstein, M. S., Donais, M. K., Porter, B. J., Wise, S. A., Mahoney, B. A., "Persistent Chlorinated Compounds and Elements in Tissues of Cook Inlet Beluga Whales Banked by the Alaska Marine Mammal Tissue Archival Project," *NISTIR 6702*, (Gaithersburg, MD), p. 67.
- Baklanov, M. R., Kondoh, E., Lin, E. K., Gidley, D. W., Lee, H.-J., Mogilnikov, K. P., Sun, J. N., "Comparative Study of Porous SOG Films with Different Non-Destructive Instrumentation," in *Proceedings of the National Interconnect Technology Conference*, in press.
- Bellitto, C., DiMarco, M. G., Branford, W. R., Green, M. A., Neumann, D. A., "Cation Distribution in Ga-Doped  $\text{Li}_{1.02}\text{Mn}_2\text{O}_4$ ," *Solid State Ionics* **140** (1), 77 (2001).

- Bianco-Peled, H., Dori, Y., Satija, S., Schneider, J., Sung, L., Tirrell, M., "Structural Study of Langmuir Monolayers Containing Lipidated Poly (Ethylene Glycol) and Peptides," *Langmuir*, in press.
- Blackman, M. J., Redford, S., "Northern Syrian Luster and Fruitware: Petrographic and Chemical Implications for Productions and Distribution," *Antiquity*, in press.
- Bode, P., de Nadai Fernandes, E. A., Greenberg, R., "INAA as a Primary Method in Metrology for Chemical Measurements," in *Proceedings Metrolsul. '99, 2nd South American Congress of Metrology* (Foz do Iguacu, Brazil, 2000), p. 89.
- Borchers, J. A., Ijiri, Y., Lind, D. M., Ivanov, P. G., Erwin, R. W., Qasba, A., Lee, S.-H., O'Donovan, K. V., Dender, D. C., "Detection of Field-Dependent Antiferromagnetic Domains in Exchange-Biased  $\text{Fe}_3\text{O}_4/\text{NiO}$  Superlattices," *Appl. Phys. Lett.* **77** (25), 4187 (2000).
- Bordallo, H. N., Chapon, L. C., Cook, J. C., Copley, J. R. D., Goremychkin, E., Kern, S., Lee, S.-H., Yildirim, T., Manson, J. L., "Spin Excitations in 3D Molecular Magnets Probed by Neutron Scattering," *Appl. Phys. A*, in press.
- Borgoul-Maciejczyk, P., Ondov, J. M., "Heterogenous Nature of Metallic Components in Baltimore Particulate Matter," *Environ. Sci. Technol.*, in press.
- Bossev, B. P., Kline, S. R., Israelachvilli, J. N., Paulaitis, M. E., "Pressure-Induced Freezing of the Hydrophobic Core Leads to a L1AEH1 Phase Transition for  $\text{C}_{12}\text{E}_5$  Micelles in  $\text{D}_2\text{O}$ ," *Langmuir*, in press.
- Bossev, D. P., Ferdinand, S., Lesemann, M., Paulaitis, M. E., "The Effect of Kilobar Pressures on Microstructure in  $\text{C}_{12}\text{E}_5$  Nonionic Microemulsions," *Langmuir*, in press.
- Bossev, D. P., Ferdinand, S., Paulaitis, M. E., "Effect of Pressure on Microstructure in Water-in-Oil and Oil-in-Water Microemulsions for  $\text{C}_{12}\text{E}_5$  n-Octane/ $\text{D}_2\text{O}$  Mixtures," *Langmuir*, in press.
- Bossev, D., Kline, S., Paulaitis, M. E., "Pressure-Induced Aggregation of  $\text{C}_{12}\text{E}_5\text{D}_{20}$  Wormlike Micelles," *Langmuir*, in press.
- Bourdarot, F., Lynn, J. W., Baggio-Saitovitch, E., Huang, Q., Sanchez, D. R., Skanthakumar, S., "Magnetic Behavior of the Rare Earth Compounds RNiBC by Neutron Scattering," *Phys. Rev. B* **64**, 104410 (2001).
- Brome, C. R., Butterworth, J. S., Dzhosyuk, S. N., Mattoni, C. E. H., McKinsey, D. N., Doyle, J. M., Huffman, P. R., Dewey, M. S., Wietfeldt, F. E., Golub, R., Lamoreaux, S. K., Coakley, K. J., "Magnetic Trapping of Ultracold Neutrons," *Phys. Rev. C* **63** (5), 5502 (2001).
- Brown, A. D. B., Rennie, A. R., "Monodisperse Colloidal Plates Under Shear," *Phys. Rev. E* **62** (1), 851 (2000).
- Bu, Z., Chowdhuri, Z., Callaway, D. J. E., "Coexistence of Fluctuating Secondary Structure and Long-Range Tertiary Interaction in Highly Denatured Alpha-Lactalbumin – A Neutron Scattering Study," *Protein Sci.*, in press.
- Bu, Z., Cook, J., Callaway, D. J. E., "Dynamics Regimes and Correlated Structural Dynamics in Native and Denatured Alpha-Lactalbumin," *J. Mol. Biol.*, in press.
- Buckley, C. E., Birnbaum, H. K., Lin, J. S., Spooner, S., Bellmann, D., Staron, P., Udovic, T. J., Hollar, E., "Characterization of H Defects in the Aluminium-Hydrogen System Using Small-Angle Scattering Techniques," *J. Appl. Crystallogr.* **34**, 119 (2001).
- Burauer, S., Belkoura, L., Strey, R., Co, C. C., Kaler, E. W., "Size and Polydispersity of Polymer Particles Obtained by Cryo-TEM, SANS and DLS," *Elektronenmikroskopie* **21**, 20 (2001).
- Burgess, I., Zamlynny, V., Szymanski, G., Lipkowski, J., Majewski, J., Smith, G., Satija, S., Ivkov, R., "Electrochemical and Neutron Reflectivity Characterization of Dodecyl Sulfate Adsorption and Aggregation at the Gold-Water Interface," *Langmuir* **17**, 3355 (2001).
- Butler, P. D., Porcar, L., Warr, G. G., Hamilton, W. A., comment on "Evidence of a Sponge-to-Lamellar Phase Transition Under Shear by X-Ray Scattering Experiments in Couette Cell," *Phys. Rev. Lett.*, in press.
- Caffrey, P. F., Ondov, J. M., "Dry Deposition of Elemental Aerosol Constituents to Lake Michigan Surface Waters, by Size and by Source," *Environ. Sci. Technol.*, in press.
- Caffrey, P. F., Ondov, J. M., "Dry Removal of Elemental Aerosol Particulate Constituents in Near Shore Gradient of Southern Lake Michigan," *Environ. Sci. Tech.*, in press.
- Caliskan, G., Kisliuk, A., Tsai, A. M., Soles, C. L., Sokolov, A. P., "Protein Dynamics in Viscous Solvents," *J. Biophys.*, in press.
- Cambell, B. J., Billings, S., Lynn, J. W., Sinha, S. K., "The Structure of Jahn-Teller Polarons in the Colossal Magnetoresistive Manganites," in press.
- Campbell, B. J., Osborn, R., Argyriou, D. N., Vasiliu-Doloc, L., Mitchell, J. F., Sinha, S. K., Ruett, L. U., Islam, Z., Lynn, J. W., "The Structure of Nanoscale Polaron Correlations in a Colossal Magnetoresistive Manganite," *Phys. Rev. B*, in press.
- Cappelletti, R. L., "The National Institute of Standards and Technology Center for Neutron Research (NCNR)," *Neutron News*, **12** (2), 10 (2001).
- Cappelletti, R. L., Clutter, L. K., edited by, "NIST Center for Neutron Research Accomplishments and Opportunities, NCNR 2000," *NIST SP 962* (2001).
- Cappelletti, R. L., Clutter, L. K., edited by, "NIST Center for Neutron Research, Programs and Accomplishments," *NISTIR 6598*.
- Cappelletti, R. L., Glinka, C. J., Krueger, S., Lindstrom, R. A., Lynn, J. W., Prask, H. J., Prince, E., Rush, J. J., Rowe, J. M., Satija, S. K., Toby, B. H., Tsai, A., Udovic, T. J., "Materials Research With Neutrons at NIST," *J. Res. Natl. Inst. Stand.* **106** (1), 187 (2001).
- Carpenter, J. M., Iverson, E. B., Mildner, D. F. R., "Time Focusing of Pulsed-Source Crystal Analyzer Spectrometers II Practical Expressions," *Nucl. Instrum. Meth. A*, in press.

- Cava, R. J., Yamaura, K., Loureiro, S., Huang, Q., Erwin, R. W., Lynn, J. W., Young, D., "Magnets, Mischief and Metals in Cobalt Analogs of the Superconducting Cuprates," *Physica C* **341**, 351 (2000).
- Chen, S. H., Liao, C., Fratini, E., Baglioni, P., Mallamace, F., "Interaction, Critical, Percolation and Kinetic Glass Transitions in Pluronic L-64 Micellar Solutions," *Colloid Surface*, **183**, 95 (2001).
- Chen, W. C., Heuser, B. J., King, J. S., "SANS Investigation of Deuteride (Hydride) Precipitation and Decomposition Morphology in Single Crystal Pd," *J. Appl. Crystallogr.* **33**, 442 (2000).
- Chen, Y. Y., Honda, Z., Zheludev, A., Broholm, C., Katsumata, K., Shapiro, S. M., "Field-Induced Three- and Two-Dimensional Freezing in a Quantum Spin Liquid," *Phys. Rev. Lett.* **86** (8), 1618 (2001).
- Chen, Y. Y., Lodge, T. P., Bates, F. S., "Entropically Driven Phase Separation of Highly Branched Linear Polyolefin Blends," *J. Polym. Sci. Pol. Phys.* **22**, 2965 (2000).
- Cheng, Y. T., Mildner, D. F. R., "A Sensitive High Resolution Neutron Imaging Detector," *Nucl. Instrum. Meth. A* **454** (2), 452 (2000).
- Cheng, Y. T., Mildner, D. F. R., Chen-Mayer, H. H., Sharov, V. A., Glinka, C., "An Imaging Plate Detector for Small-Angle Neutron Scattering," *J. Appl. Crystallogr.* **33**, 1253 (2000).
- Chen-Mayer, H. H., Lamaze, G. P., Mildner, D. F. R., Zeissler, R., Gibson, W. M., "Neutron Imaging and Prompt Gamma Activation Analysis Using a Monolithic Capillary Neutron Lens," in *Proceedings of the 3rd International Congress on Analytic Sciences, Analytical Science*, in press.
- Chen-Mayer, H. H., Lamaze, G. P., Satija, S. K., "Characterization of BPSG Films Using Neutron Depth Profiling and Neutron/X-Ray Reflectometry," in *Proceedings of 2000 International Conference on Characterization and Metrology for ULSI Technology*, edited by D. G. Seiler, A. C. Diebold, W. M. Bullies, T. J. Shaffner, R. McDonald, E. J. Walters (AIP Press, Woodbury, NY), **550**, 407 (2001).
- Choi, S. M., Barker, J. G., Glinka, C. J., Cheong, Y. T., Gammel, P. L., "Focusing Cold Neutrons with Multiple Biconcave Lenses for Small-Angle Neutron Scattering," *J. Appl. Crystallogr.* **33** (792), 2000.
- Choi, S. M., Briber, R. M., Bauer, B. J., Liu, D.-W., Gauthier, M., "Small Angle Neutron Scattering of Blends of Arborescent Polystyrenes," *Macromol.* **33** (17), 6495 (2000).
- Choi, S. M., Lynn, J. W., Lopez, D., Gammel, P. L., Varma, C. M., "Direct Observation of Spontaneous Weak-Ferromagnetism in the Superconductor  $\text{ErNi}_2\text{B}_2\text{C}$ ," *Phys. Rev. Lett.* **86**, 7121 (2001).
- Christianson, R. J., Leheny, R. L., Birgeneau, R. J., Erwin, R. W., "Critical Dynamics of a Spin-5/2 Two-Dimensional Isotropic Antiferromagnet," *Phys. Rev. B* **63** (14), 0401 (2001).
- Co, C. C., DeVries, R., Kaler, E. W., "Small-Angle Neutron Scattering Study of Monomer Partitioning," *Macromol.* **34**, 3224 (2001).
- Cohen, R. E., Gulseren, O., "Thermal Equation of State of Tantalum," *Phys. Rev. B* **63**, 224101 (2001).
- Copley, J. R. D., "NIST Recommended Practice Guide; The Fundamentals of Neutron Powder Diffraction," NIST SP 960-2, in press.
- Cosgrove, T., Howe, A., Thomsen, L., Armes, S. P., Billingham, N., "The Structure of Hydrophilic-Hydrophobic Block Copolymers and Their Interactions With Salt and a Surfactant," *Langmuir*, in press.
- DeVries, R., Co, C. C., Kaler, E. W., "Influence of Monomer Partitioning, Termination, and Diffusion Limitations on Polymerization Kinetics," *Macromol.* **34**, 3233 (2001).
- DeWall, J., Dimeo, R. M., Sokol, P. E., "Diffusion and Phase Transitions of Molecular Hydrogen in Zeolites," *Phys. Rev. B*, in press.
- Dewey, M. S., Kessler, E. G., "Precision Measurement of Fundamental Constants Using GAMS4," *J. Res. Natl. Inst. Stan.* **105** (1), 11 (2000).
- Dimeo, R. M., Chowdhuri, Z., Meyer, A., Gehring, P. M., Neumann, D. A., "The NIST High Flux Backscattering Spectrometer," *Appl. Phys. A*, in press.
- Dimeo, R. M., Neumann, D. A., "Low Temperature Dynamics of Confined Methyl Iodide," *Phys. Rev. B* **63** (1), 4301 (2001).
- Dimeo, R. M., Neumann, D. A., "The Effects of Confinement on Rotational Tunneling," *Appl. Phys. A*, in press.
- DiNoia, T. P., Kirby, C. F., Van Zanten, J. H., McHugh, M. A., "SANS Study of Polymer-Supercritical Fluid Solutions: Transitions from Liquid to Supercritical Fluid Solvent Quality," *J. Am. Chem. Soc.* **33** (17), 6321 (2000).
- Divita, F., Terry, J., Kidwell, C. A., Ondov, J. M., Pandis, S., "Characterization of Primary Aerosol Emissions from a Municipal Incinerator Via Ground-Level Sampling with a Micro-Orifice Impactor," *Atmos. Environ.*, in press.
- Douglas, J. F., Kent, M. S., Satija, S. K., Karim, A., "Swelling of Grafted Polymer 'Brushes,'" in *Proceedings Encyclopedia of Materials: Science and Technology*, in press.
- Downing, R. G., Iyengar, G. V., "Methodological Issues in the Analytical Determination of Boron," *Environ. Health Perspect.*, in press.
- Dubsky, J., Prask, H. J., Matejicek, J., Gnäupel-Herold, T., "Stresses in Plasma Sprayed  $\text{Cr}_2\text{O}_3$  Coatings Measured by Neutron Diffraction," in *Proceedings of the International Conference on Neutron Scattering* (Munich, Germany, September 2001), in press.
- Eid, K., Portner, D., Borchers, J. A., Loloei, R., Tsai, M., O'Donovan, K. V., Pratt, W. P., Bass, J., "Mean-Free Path Effects in CPP Magnetoresistance of Magnetic Multilayers," *Phys. Rev. B*, in press.
- Elliot, J., Meuse, V., Silin, V., Krueger, S., Woodward, J. T., Petrallil-Mallow, T. P., Plant, A. L., "Biomedical Membranes on Metal Supports: Opportunities and Challenges," in *Proceedings of the Biomolecular Films: Design, Function, and Application*, edited by J. Rusling (New York, Marcel Dekker, Inc.), in press.
- Esker, A. R., Grull, H., Satija, S. K., Han, C. C., "Probing Polymer Dynamics with Ultra-Thin Membranes by Neutron Reflectivity" *Polymer Preprints* **221**, (2001).
- Esker, A. R., Grull, H., Wegner, G., Satija, S. K., Han, C. C., "Isotopic Selectivity in Ultra Thin Langmuir-Blodgett Membranes of a Cross-Linked Cellulose Derivative," *Langmuir* **17**, 4688 (2001).
- Evmenchenko, G., Bauer, B. J., Kleppinger, R., Forier, B., Dehaven, W., Amis, E. J., Miscehnko, N., Reynaers, H., "The Influence of Molecular Architecture and Solvent Type on the Size of Structure of Poly (Benzyl Ether) Dendrimers by SANS," *Chem. Phys.* **202** (6), 891 (2001).

- Farrow, R. F. C., Marks, R. F., Toney, M. F., Hannibal, K., David, S., Kellock, A., Borchers, J. A., O'Donovan, K. V., Smith, D. J., "Spontaneous Chemical Ordering and Exchange Bias in Epitaxial  $Mn_{0.52}Pd_{0.48}/Fe$  (001) Bilayers Prepared at Room Temperature," *Appl. Phys. Lett.*, in press.
- Feeley, M., Brown, C. M., Tsai, A., Neumann, D. A., Debenedetti, P. G., "Incoherent Quasi-Elastic Neutron Scattering From Fructose-Water Solutions," *J. Phys. Chem.* **105** (32), 7799 (2001).
- Ferdinand, S., Lesemann, M., Paulaitis, M. E., "Effect of Pressure on Microstructure of  $C_{12}E_5$  n-Octane-in-D<sub>2</sub>O Microemulsions," *Langmuir*, **16**, 10106 (2000).
- FitzGerald, S. A., Thomas, J. J., Neumann, D. A., Livingston, R. A., "A Neutron Scattering Study of the Role of Diffusion in the Hydration of Tricalcium Silicate," *Cement and Concrete Res.*, in press.
- Fratini, E., Chen, S.-H., Baglioni, P., Cook, J., Copley, J., "Dynamic Scaling of Quasi-Elastic Neutron Scattering Spectra From Interfacial Water," *Phys. Rev. E*, in press.
- Freeman, K. S., Beck Tan, N. C., Trevino, S. F., Kline, S., McGown, L. B., Kiserow, D. J., "Size and Polydispersity Determinations of AOT/Bile Salt Reversed Micelles Obtained by Small-Angle Neutron Scattering," *Langmuir* **17** (13), 3912 (2001).
- Fultz, B., Witham, C. K., Udoovic, T. J., "Distributions of Hydrogen and Strains in LaNi<sub>5</sub> and LaNi<sub>4.75</sub>Sn<sub>0.25</sub>," *J. Alloys Compnd.*, in press.
- Garvey, C. J., Parker, I. H., Simon, G. P., Whittaker, A. K., Knott, R. B., "An Experimental Study by NMR and SANS of the Ambient Hydration of Paper," in *Proceedings of the 12th Fundamental Research Symposium*, (Pulp and Paper Fundamental Research Society, Oxford), in press.
- Gehring, P. M., Park, S.-E., Shirane, G., "Dynamical Effects of the Nanometer-Sized Polarized Domains in Pb(Zn<sub>1/3</sub>Nb<sub>2/3</sub>)O<sub>3</sub>," *Phys. Rev.* **B63** (22), 4109 (2001).
- Geissler, E., Horkay F., Hecht, A. M., "Structure of Polymer Solutions and Gels Containing Fillers," *Macromol. Symp.* **171**, 171 (2001).
- Geissler, E., Hecht, A. M., "Treatment of Incoherent Signal Subtraction" in *Proceedings of the Frontiers in SAXS and SANS, ESRF-ILL-CEA Workshop* (Grenoble, France, February 12-13, 1999), in press.
- Geissler, E., Horkay, F., Hecht, A. M., Deschamps, P., "Neutron Scattering From Elastomer Gels," *Kautschuk, Gummi, and Kunststoffe*, in press.
- Geissler, E., Horkay, F., McKenna, G. B., Deschamp, P., "Osmotic and Mechanical Observations of Swollen Polyisoprene Rubber and its Microscopic Structure," in *Proceedings of Worldwide Amazon Rubber Conference* (Manaus, Brazil, October 31 – November 4, 1999), in press.
- Gentile, T. R., Jones, G. L., Thompson, A. K., Rizi, R. R., Dimitrov, I. E., Roberts, D., Gefter, W., Schnall, M. D., Leigh, J. S., "A Compact Compressor for Application of Metastability-Exchange Optical Pumping of <sup>3</sup>He to Human Lung Imaging," *Magn. Reson. Med.*, in press.
- Gentile, T. R., Rich, D. R., Thompson, A. K., Bailey, C., Gericke, M., Hussey, D., Neff, B., Snow, W. M., Jones, G. L., Wildman, E., "The NIST-Indiana-Hamilton Polarized <sup>3</sup>He Spin Filter Program," in *Proceedings of the Fundamental Physics with Pulsed Neutron Beams Conference*, edited by C. R. Gould, G. L. Green, F. Plasil, W. M. Snow (World Scientific, Singapore, 2001), p. 230.
- Gibson, W. M., Chen-Mayer, H. H., Mildner, D. F. R., Prask, H. J., Schultz, A. J., Youngman, R., Gnäupel-Herold, T., Miller, M. E., Vitt, R., "Polycapillary Optics Based Neutron Focusing for Small Sample Neutron Crystallography," in *Proceedings of the Adv. In X-Ray Analysis* **45**, in press.
- Giebultowicz, T. M., Kepa, H., Blinowski, J., Kacmar, P., "Neutron Scattering Studies of Interlayer Correlations in Magnetic Semiconductor Superlattices," *Physics E*, in press.
- Gilra, N., Cohen C., Briber, R. M., Bauer, B. J., Hedden, R., Panagiotopoulos, A. Z., "A SANS Study in Strained and Unstrained End-Linked Elastomers," *Macromol.*, **34** (22), 7773 (2001).
- Gilliam, D. M., "NIST Neutron Physics and Dosimetry," in *Proceedings of the Transactions of the American Nuclear Society*, November 12–16, 2000, (Washington, DC, 2000), p. 496.
- Glagolenko, I. Y., Carney, K. P., Kern, S., Goremychkin, E. A., Udoovic, T. J., Copley, J. R. D., Cook, J. C., "Quantitative Analysis of UH<sub>3</sub> in U Metal and UO<sub>2</sub> Matrices by Neutron Vibrational Spectroscopy," *Appl. Phys. A*, in press.
- Glinka, C. J., "Review of Methods of X-Ray and Neutron Scattering in Polymer Science," by Ryong-Joon Roe, *Physics Today* **54** (3), 60 (2001).
- Gnäupel-Herold, T., "Single Crystal Elastic Constants From Powder Measurements," in *Proceedings of Accuracy in Powder Diffraction. III* (NIST Special Publication), in press.
- Gnäupel-Herold, T., Haeffner, D. R., Prask, H. J., Matejicek, J., "Stress Determination by Whole Pattern Analysis-Application to Synchrotron HEXRD Measurements on Thermal Sprayed Coatings," in *Proceedings of The Sixth International Conference on Residual Stresses*, (IOM, London, 2000), p. 751.
- Gnäupel-Herold, T., Matejicek, J., Prask, H. J., "Mechanical Properties of Plasma Sprayed Coatings – Measured by Diffraction," in *Proceedings of the 9th International Metallurgical Conference Metal 2000*, (Ostrava, CZ), paper no. 508 (CD-ROM).
- Gnäupel-Herold, T., Prask, H., Fisher, J., Cheng, X., "Residual Stress Modification by Means of Ultrasonic Impact Treatment," in *Proceedings of the Annual Conference of Society for Experimental Mechanics*. (Portland, OR, June 2001), in press.
- Gnäupel-Herold, T., Prask, H. J., Magiera, J., "Effect of Grinding Strategy on Accumulation of Damage in Rails: Neutron Diffraction Investigation of Residual Stresses in Transverse and Oblique Cut Rail Slices," in *Proceedings of The Sixth International Conference on Residual Stresses* (IOM, London, 2000), p. 879.
- Green, M. A., Waldron, J. E. L., Neumann, D. A., "Charge and Spin Ordering in Monoclinic Nb<sub>12</sub>O<sub>29</sub>," *J. Am. Chem. Soc.* **123** (24), 5833 (2001).
- Greenberg, C. C., Foster, M. D., Turner, C. M., Corona-Galvan, S., Cloutet, E., Quirk, R. P., Butler, P. D., Hawker, C., "Effective Interaction Parameter Between Branched and Linear PS," *J. Polym. Sci.* **39**, 2549 (2001).

- Greenberg, C. C., Teale, D. M., Foster, M. D., Turner, C. M., Corona-Galvan, S., Cloutet, E., Quirk, R. P., Majkrzak, C. F., Demaree, D., "Surface Segregation in Blends of Linear and Regularly Star Branched Polystyrene," *Macromol.*, in press.
- Greenberg, C. C., Foster, M. D., Turner, S., Corona-Galva, E., Cloutet, R., Quirk, P., Butler, P. D., Hammouda, B., Hawker, C., "Effective Interaction Parameter Between Branched and Linear PS," *J. Polym. Sci.* **39** (21), 2549 (2001).
- Grohn, F., Bauer, B. J., Akpalu, Y. A., Jackson, C. L., Amis, E. J., "Dendrimers as Templates for the Formation of Inorganic Nanoclusters," *Macromol.* **33** (16), 6042 (2000).
- Grohn, F., Bauer, B. J., Amis, E. J., "Organic-Inorganic Hybrid Particles by Dendrimer Nanotemplating," in *Proceedings of the Materials Research Society Meeting* (April 2000), p. 628.
- Gruell, H., Sung, L., Karim, A., Douglas, J. F., Satija, S. K., Hayashi, M., Jinnai, H., Hashimoto, T., Han, C. C., "Surface Segregation of a Symmetrical Segregating Polymer Blend Film Above and Below the Critical Point of Phase Separation," *Phys. Rev. Lett.*, in press.
- Gulseren, O., Yildirim, T., Ciraci, S., "Tunable Adsorption on Carbon Nanotubes," *Phys. Rev. Lett.* **87** (11), 116802 (2001).
- Gulseren, O., Yildirim, T., Ciraci, S., Kilic, C., "First-Principles Study of the Electronic Structure of Carbon Nanotubes: Variable and Reversible Band Gap Engineering," *Phys. Rev. B*, in press.
- Guo, L., Colby, R. H., Lin, M. Y., Dado, G. P., "Micellar Structure Changes in Aqueous Mixtures of Nonionic Surfactants," *J. Rheol.* **45**, 1223 (2001).
- Hagemann, I. S., Huang, Q., Gao, X. P. A., Ramirez, A. P., Cava, R. J., "Geometric Magnetic Frustration in  $\text{Ba}_2\text{Sn}_2\text{ZnGa}_4\text{Cr}_6\text{O}_{22}$ : A Two-Dimensional Spinel Based Kagome Lattice," *Phys. Rev. Lett.* **86** (5), 894 (2001).
- Hammouda, B., "SANS From Polymers Under Pressure," *Neutron News* **12**, 20 (2001).
- Han, C. C., Hobbie, E. K., Nakatani, A. I., Karim, A., "Critical Temperature Shift and Mixing in Polymer Blends Under Simple Shear Flow," *J. Phys. Soc. Japan.* **70**, 317 (2001).
- Han, C. C., Schmidt, G., Nakatani, A. I., Butler, P., "A Small Angle Neutron Scattering Study on Polymer Clay Solutions" in *Proceedings ACS PMSE*, (September 2001, Chicago, IL) p. 219.
- Han, C. C., Schmidt, G., Nakatani, A. I., Karim, A., "Characterization of Polymer-Clay Solutions by Rheology, Flow Birefringence and SANS," *Polymer Prints*, **42**, 269 (2001).
- Hanakahi, L. A., Bu, Z., Maizels, N., "The C-Terminal Domain of Nucleolin Accelerates Nucleic Acid Annealing," *Biochem.* **39**, 15493 (2000).
- Hayashi, M., Hashimoto, T., Hasegawa, H., Takenaka, M., Gruell, H., Esker, A. R., Weber, M., Satija, S. K., Han, C. C., Nagao, M., "Interface Between a Polysulfone and Polyamide as Studied by Combined Neutron Reflectivity and Small-Angle Neutron Scattering Techniques," *Macromol.* **33** (22), 8375 (2000).
- Hayashi, M., Hashimoto, T., Weber, M., Gruell, H., Esker, A., Han, C. C., Satija, S. K., "Transient Interface Instability in Bilayer Polymer Films as Observed by Neutron Reflectivity Studies," *Macromol.*, in press.
- He, T., Huang, Q., Cava, R. J., "Comparison of the Magnetic Properties of Isoelectronic  $\text{Sr}_x(\text{Na}_{0.5}\text{La}_{0.5})_{1-x}\text{RuO}_3$  and  $\text{Sr}_x\text{Ca}_{1-x}\text{RuO}_3$ ," *Phys. Rev. B* **63**, 4402 (2001).
- He, T., Huang, Q., Ramirez, A. P., Wang, Y., Regan, K. A., Rogado, N., Hayward, M. A., Haas, M. K., Slusky, J. S., Inumaru, K., Zandbergen, H. W., Ong, N. P., Cava, R. J., "Superconductivity in the Non-Oxide Perovskite  $\text{MgCNI}_3$ ," *Nature* **411**, 54 (2001).
- Heath, C. H., Streletzky, K. A., Wolk, J., Wyslouzil, B. E., Strey, R., " $\text{D}_2\text{O}-\text{H}_2\text{O}$  Condensation in Supersonic Nozzles Experiments," in *Proceedings Nucleation and Atmospheric Aerosols, 2000*, edited by B. H., Hale, Kulmama, M., (American Institute of Physics, New York, 2000), p. 59.
- Hecht, A. M., Horkay, F., Geissler, E., "Neutron Scattering Investigations on a Bimodal Polymer Gel," *J. Phys. Chem. B* **105**, 5637 (2001).
- Hecht, A. M., Horkay, F., Geissler, E., "Structure of PDMS Solutions Containing Fumed Silica," *Phys. Rev. E*, in press.
- Heller-Zeisler, S. F., Borgoul, P. V., Moore, R. R., Smoliar, M., Suarez, A. E., Ondov, J. M., "Comparison of INAA and RNAA Methods with Thermal-Ionization Mass Spectrometry for Iridium Determinations in Atmospheric Tracer Studies," *J. Radioanal. Nuc. Chem.* **244**, 93 (2000).
- Heuser B. J., Chen, W. C., "Small-Angle Neutron Scattering Measurements of Deuteride (Hydride) Formation and Decomposition in Single-Crystal Pd," *Phys. Rev. B*, in press.
- Hiraka, H., Endoh, Y., Fujita, M., Lee, Y. S., Kulda, J., Ivanov, A., Birgeneau, R. J., "Spin Fluctuations in the Underdoped High-TC Cuprate  $\text{La}_{1.93}\text{Sr}_{0.07}\text{CuO}_4$ ," *J. Phys. Soc. Japan* **70** (3), 853 (2001).
- Ho, D. L., Briber, R. M., Glinka, C. J., "Studies on Organically Modified Clays Using Scattering Techniques," *ACS Symposium of Polymer Nanocomposites* **804**, (11) (2001).
- Ho, D. L., Briber, R. M., Glinka, C. J., "Characterization of Organically Modified Clays Using Scattering and Microscopy Techniques," *Chem. Mater.* **13** (5), 1923 (2001).
- Hoffman, A., Fitzsimmons, M. R., Dura, J. A., Majkrzak, C. F., "Investigating Magnetic Proximity Effects in NiO/Pd with Polarized Neutron Reflectometry," *Phys. Rev. B*, in press.
- Hone, J. H. E., Howe, A. M., Cosgrove, T., "A Rheological and Small Angle Neutron Scattering Study of the Structure of Gelatin/Polyelectrolyte Complexes Under Shear," *Macromol.* **33** (4), 1199 (2000).
- Horkay, F., Basser, P. J., Hecht, A. M., Geissler, E., "Osmotic and SANS Observations on Sodium Polyacrylate Hydrogels in Physiological Salt Solutions," *Macromol.* **33**, 8329 (2000).
- Horkay, F., Basser, P. J., Hecht, A. M., Geissler, E., "Ion-Exchange Induced Change in the Structure and Osmotic Properties of Sodium Polyacrylate Hydrogels," *Macromol. Symp.* **171**, 201 (2001).
- Horkay, F., Hecht, A. M., Basser, P. J., Geissler, E., "Comparison Between Natural Gels and Neutralized Polyelectrolyte Gels in the Presence of Divalent Cations," *Macromol.* **34**, 4285 (2001).
- Horkay, F., Hecht, A. M., Geissler, E., "Neutron Scattering Investigations on Filled Polymer Gels," in *Proceedings of the 219th ACS National Meeting 41* (San Francisco, CA, March 26-30, 2000) **219**, 158 (2000).
- Horkay, F., Hecht, A. M., Geissler, E., "Neutron Scattering Investigations on Bimodal Polymer Gels," *J. Phys. Chem. B* **105**, 5637 (2001).
- Horkay, F., McKenna, G. B., Deschamps, P., Geissler, E., "Neutron Scattering Properties of Randomly Cross-Linked Polyisoprene Gels," *Macromol.* **33** (14), 5215 (2000).

- Horkay, F., McKenna, G. B., Deschamps, P., Geissler, E., "Relationship Between Microscopic Structure and Osmotic and Mechanical Behavior of Polyisoprene Gels," *Macromol.* **33**, 5215 (2000).
- Horkay, F., McKenna, G. B., Geissler, E., "Nanostructures in Swollen Polymer Networks," in *Proceedings of the Polymer Networks 98, 14th Polymer Networks, Group Conference* (Trondheim, Norway, June 28 – July 1, 1998), The Wiley Polymer Networks Group Review, in press.
- Huang, Q., He, T., Regan, K. A., Rogado, N., Hayward, M., Haas, M. K., Inumaru, K., Cava, R. J., "Temperature Dependence of the Structural Parameters of the Non-Oxide Perovskite Superconductor MgCNi<sub>3</sub>," *Physica C*, in press.
- Hudson, B. S., "Inelastic Neutron Scattering: A Tool in Molecular Vibrational Spectroscopy and a Test of Ab Initio Methods," *J. Phys Chem. A* **105**, 3949 (2001).
- Huffman, P. R., Brome, C. R., Butterworth, J. S., Coakley, K. J., Dewey, M. S., Dzhosyuk, S. N., Gilliam, D. M., Golub, R., Greene, G. L., Habicht, K., Lamoreaux, S. K., Mattoni, C. E. H., McKinsey, D. N., Wietfeldt, F. E., Doyle, J. M., "Progress Towards Magnetic Trapping of Ultra-Cold Neutrons," *Nucl. Instrum. Meth. A* **440** (3), 522 (2000).
- Huffman, P. R., Brome, C. R., Butterworth, J. S., Coakley, K. J., Dewey, M. S., Dzhosyuk, S. N., Golub, R., Greene, G. L., Habicht, K., Lamoreaux, S. K., Mattoni, C. E. H., McKinsey, D. N., Wietfeldt, F. E., Doyle, J. M., "Magnetic Trapping of Neutrons," *Nature* **403** (6765), 62 (2000).
- Huffman, P. R., Brome, C. R., Butterworth, J. S., Dzhosyuk, S. N., Golub, R., Lamoreaux, S. K., Mattoni, C. E. H., McKinsey, D. N., Doyle, J. M., "Magnetically Stabilized Luminescent Excitations in Hexagonal Boron Nitride," *Lumin.* **92** (4), 291 (2001).
- Huffman, P. R., Coakley, K. J., Thompson, A. K., Yang, G. L., Wietfeldt, F. E., Alvine, K. J., Brome, C. R., Dzhosyuk, S. N., Mattoni, C. E. H., Michniak, R. A., McKinsey, D. N., Yang, L., Doyle, J. M., Golub, R., Habicht, K., Koch, J., Lamoreaux, S. K., Leite, M. L., Maia, L., Rodrigues, A. C., Zanotto, E. D., "Magnetic Trapping of Ultracold Neutrons: Prospects for an Improved Measurement of the Neutron Lifetime," in *Proceedings of The Workshop on Fundamental Physics with Pulsed Neutron Beams* (World Scientific Publishing Co. Pte. Ltd., Singapore, 2001), p.156.
- Hwang, S.-R., Li, W.-H., Lee, K. C., Lynn, J. W., Luo, H. M., Ku, H. C., "Structural and Magnetic Properties of Pr<sub>1+x</sub>Ba<sub>2-x</sub>Cu<sub>3</sub>O<sub>7+y</sub>," *Phys. Rev. B* **63** (17), 2401 (2001).
- Hwang, S.-R., Li, W.-H., Lee, K. C., Lynn, J. W., Wu, C.-G., "Spiral Magnetic Structure of Fe in van der Waals Gapped FeOCl," *Phys. Rev. B* **62** (21), 14157 (2000).
- Ilavsky, J., Stalick, J. K., Wallace, J., in *Proceedings of the 1st International Thermal Spray Conference* (May 8–11, 2000, Montreal, Quebec Canada) edited by C. C. Berndt (New York), p. 1185.
- Ivkov, R., Butler, P. D., Satija, S. K., "Effect of Solvent Flow on a Polymer Brush: A Neutron Reflectivity Study of the Brush Height and Chain Density Profile," *Langmuir* **17** (10), 2999 (2001).
- Ivkov, R., Gehring, P. M., Maliszewskyj, N. C., Krishnamoorti, R., "Structure and Dynamics of Polymers in Confined Geometries: Neutron Studies of Intercalated Clay-Polymer Nanocomposites," in *Proceedings SPE 57th Annual Technical Conference and Exhibits*, (Society of Plastics Engineers, Inc., Brookfield, 2000), p. 1783.
- James, W. D., Zeisler, R., "Uptake of Oxygen in a Coal Standard Reference Material Determined by 14-MeV Neutron Activation Analysis," *J. Radioanal. Nucl. Ch.* **248** (1), 233 (2001).
- Jeng, U., Lin, T.-L., Wang, L. Y., Chiang, L. Y., Ho, D. L., Han, C. C., "SANS Structural Characterization of Fullerol-Derived Star Polymers in Organic Solutions," *Appl. Phys. A*, in press.
- Jones, G. L., Adams, J. M., Anaya, J. M., Bowles, T. J., Chupp, T. E., Coulter, K. P., Dewey, M. S., Freedman, S. J., Fujikawa, B. K., Garcia, A., Greene, G. L., Hwang, S. R., Lising, L. J., Mumm, H. P., Nico, J. S., Robertson, R. G. H., Steiger, T. D., Teasdale, W. A., Thompson, A. K., Wasserman, E. G., Wietfeldt, F. E., Wilkerson, J. F., "Time Reversal in Polarized Neutron Decay: The Emit Experiment," *Nucl. Instrum. Meth. A* **440** (3), 648 (2000).
- Jones, G. L., Gentile, T. R., Thompson, A. K., Chowduri, Z., Dewey, M. S., Snow, W. M., Wietfeldt, F. E., "Test of He-3 Based Neutron Polarizers at NIST," *Nucl. Instrum. Meth. A* **440** (3), 772 (2000).
- Jones, R. L., Kumar, S. K., Ho, D. L., Briber, R. M., Russell, T. P., "Chain Conformation in Ultrathin Polymer Films Using Small Angle Neutron Scattering," *Macromol.* **34** (3), 559 (2001).
- Jung, H. T., Coldren, B., Zasadzinski, J. A., Iampietro, D. J., Kaler, E. W., "The Origins of Stability of Spontaneous Vesicles," in *Proceedings of the National Academic Science*, (2001) p. 1535.
- Kamitakahara, W. A., Trevino, S. F., Buga, S. G., Blank, V. D., "Destructive Annealing of a Superhard Carbon Derived From C<sub>60</sub>," *Phys. Rev. B*, in press.
- Karlsson, E. B., Abdul-Redah, T., Udoovic, T. J., Hjörvarsson, B., Chatzidimitriou-Dreismann, C. A., "Short-Lived Proton Entanglement in Yttrium Hydrides," *Appl. Phys. A*, in press.
- Keimer, B., Casa, D., Ivanov, A., Lynn, J. W., Zimmermann, M. V., Hill, J. P., Gibbs, D., Taguchi, Y., Tokura, Y., "Spin Dynamics and Orbital State in LaTiO<sub>3</sub>," *Phys. Rev. Lett.* **85** (18), 3946 (2000).
- Kent, M., "A Quantitative Study of Tethered Chains in Various Solution Conditions Using Langmuir Diblock Copolymer Monolayers," *Macromol.*, in press.
- Kepa, H., Kutner-Pielaszek, J., Twardowski, A., Sipatov, A. Y., Majkrzak, C. F., Story, T., Galazka, R. R., Giebultowicz, T. M., "Interlayer Correlations in Ferromagnetic Semiconductor Superlattices EuS/PbS," *J. Magn. Magn. Mater.*, in press.
- Kessler, E. G., Dewey, M. S., Deslattes, R. D., Henins, A., Borner, H. G., Jentschel, M., Doll, C., Lehmann, H., "The Deuteron Binding and the Neutron Mass," *Phys. Lett. A* **255** (4-6), 221 (2000).
- Kessler, E. G., Dewey, M. S., Deslattes, R. D., Henins, A., Borner, H. G., Jentschel, M., Lehmann, H., "The GAMS4 Flat Crystal Facility," *Nucl. Instrum. Meth. A* **457** (1-2), 187 (2000).
- Khalifah, P., Huang, Q., Ho, D. M., Zandbergen, H. W., Cava, R. J., "La<sub>7</sub>Ru<sub>3</sub>O<sub>18</sub> and La<sub>4.87</sub>Ru<sub>2</sub>O<sub>12</sub>: Geometric Frustration in Two Closely Related Structures With Isolated RuO<sub>6</sub> Octahedra," *J. Solid State Chem.* **155** (1), 189 (2000).

- Khalifah, P., Jin, R., Liu, Y., Huang, Q., Gao, X. P. A., Ramirez, A. P., Cava, R. J., "Non-Fermi-Liquid Behavior in  $\text{La}_4\text{Ru}_6\text{O}_{19}$ : A Cubic, Non-Perovskite Ruthenate With Metal-Metal Bonding," *Nature* **411**, 669 (2001).
- Kilic, C., Ciraci, S., Gulseren, O., Yildirim, T., "Variable and Reversible Quantum Structures on a Single Carbon Nanotube," *Phys. Rev.* **B62** (24), 16345 (2000).
- Kim, S. D., Klein, A., Sperling, L. H., Boczar, E. M., Bauer, B. J., "SANS Study of Sulfite End Group Effect on Polystyrene Self-Diffusion," *Macromol.* **33** (22), 8334 (2000).
- Kim, W. G., Chang, M. Y., Garetz, B. A., Newstein, M. C., Balsara, N. P., Lee, J. H., Hahn, H., Patel, S. S., "Effect of Quench Depth on Grain Structure in Quiescently Ordered Block Copolymers," *J. Chem. Phys.* **114**, (22), 10196 (2001).
- Kim, W. G., Garetz, B. A., Newstein, M. C., N. P., Balsara, "Maximizing Grain Growth Rate During the Disorder-to-Order Transition in Block Copolymer Melts," *J. Polym. Sci.* **39** (19), 2231 (2001).
- Kim, Y. J., Birgeneau, R. J., Chou, F. C., Erwin, R. W., Kastner, M. A., "Critical Spin Dynamics of the 2D Quantum Heisenberg Antiferromagnets  $\text{Sr}_2\text{CuO}_2\text{C}_{12}$  and  $\text{Sr}_2\text{Cu}_3\text{O}_4\text{C}_{12}$ ," *Phys. Rev. Lett.* **86** (14), 3144 (2001).
- Kim, Y. J., Birgeneau, R. J., Chou, F. C., Greven, M., Kastner, M. A., Lee, Y. S., Wells, B. O., Aharonov, A., Entin-Wohlman, O., Korenblit, I. V., Harris, A. B., Erwin, R. W., Shirane, G., "Neutron Scattering Study of  $\text{Sr}_2\text{Cu}_3\text{O}_4\text{C}_{12}$ ," *Phys. Rev. B* **64** (2), 4435 (2001).
- Kim, Y. J., Wakimoto, S., Shapiro, S. M., Gehring, P. M., Ramirez, A. P., "Neutron Scattering Study of Antiferromagnetic Order in  $\text{CaCu}_3\text{Ti}_4\text{O}_{12}$ ," *Phys. Rev. B*, in press.
- Kiryukhin, V., Kim, Y. J., Thomas, K. J., Chou, F. C., Erwin, R. W., Huang, Q., Kastner, M. A., Birgeneau, R. J., "Magnetic Properties of the  $S=1/2$  Quasi-One-Dimensional Antiferromagnet  $\text{CaCu}_2\text{O}_3$ ," *Phys. Rev. B* **63** (14), 4418 (2001).
- Kneller, L. R., Edwards, A. M., Nordgren, C. E., Blasie, J. K., Berk, N. F., Krueger, S., Majkrzak, C. F., "Hydration State of Single Cytochrome Monolayers on Soft Interfaces Via Neutron Interferometry," *Biophys. J.* **80** (5), 2248 (2001).
- Koehler, R. D., Raghavan, S. R., Kaler, E. W., "Microstructure and Dynamics of Wormlike Micellar Solutions Formed by Mixing Cationic and Anionic Surfactants," *J. Phys. Chem. B* **104**, (47), 11035 (2000).
- Koga, T., Shin, K., Zhang, Y., Seo, Y.-S., Rafailovich, M. H., Sokolov, J., Chu, B., Satija, S. K., "Fluctuation-Induced Swelling of Polymer Thin Films- $\text{CO}_2$  Systems as Gas-Supercritical Transition," *J. Phys. Soc. Japan.* **70**, 347 (2001).
- Koga, T., Shin, K., Zhang, Y., Seo, Y.-S., Rafailovich, M. H., Sokolov, J., Chu, B., Satija, S. K., "Polymer Thin Films in Supercritical  $\text{CO}_2$ ," in *Proceedings of the ASR-2000*, *J. Phys. Soc. Japan.*, in press.
- Kolb, R., Lin, E. K., Wu, W.-L., Satija, S. K., "Neutron Reflectivity Measurements of Polymer Melt Mobility Near Oxidized Silicon Surfaces Modified with Self-Assembled Monolayers," *Langmuir*, in press.
- Kondoh, E., Baklanov, M. R., Lin, E. K., Gidley, D. W., Nakashima, A., "Comparative Study of Pore Size of Low-Dielectric-Constant Porous Spin-on-Glass Films with Different Ways of Non-Destructive Instrumentation," *J. Appl. Phys.*, in press.
- Koubi, L., Tarek, M., Bandyopadhyay, S., Klein, M. L., "Membrane Structural Perturbations Caused by Anesthetics and Non-Immobilizers: A Molecular Dynamics Investigation," *Biophys. J.*, in press.
- Koubi, L., Tarek, M., Bandyopadhyay, S., Klein, M. L., Scharf, D., "Distribution of Non-Immobilizers and Anesthetics in Model Membranes," *Anesthesiology*, in press.
- Krishnan, K., Almdal, K., Burghardt, W. R., Lodge, T. P., Bates, F. S., "Shear-Induced Nano-Macro Structural Transition in a Polymeric Bicontinuous Microemulsion," *Phys. Rev. Lett.* **87** (9), 301 (2001).
- Krueger, J. K., Gallagher, S. C., Wang, C. L., Trehella, J., "Calmodulin Remains Extended Upon Binding to Smooth Muscle Caldesmon: A Combined Scattering and Fourier Transform Infrared Spectroscopy Study," *Biochem.* **39** (14), 3979 (2000).
- Krueger, S., "Neutron Reflection From Interfaces With Biological and Biomimetic Materials," *Curr. Opin. Coll. Int. Sci.* **6** (2), 111 (2001).
- Krueger, S., Meuse, C. W., Majkrzak, C. F., Dura, J. A., Berk, N. F., Tarek, M., Plant, A. L., "Investigation of Hybrid Bilayer Membranes With Neutron Reflectometry: Probing the Location of Interactions of Melittin," *Langmuir* **17** (2), 511 (2001).
- Kuznetsov, I. A., Rudnev, Y. P., Serebrov, A. P., Solovei, V. A., Stepanenko, I. V., Vasiliev, A. V., Mostovoy, Y. A., Zimmer, O., Yerozolimsky, B. G., Dewey, M. S., Wietfeldt, F., "An Experiment to Measure  $\Lambda = G(A)/G(V)$  From a Combination of Angular Correlation Coefficients in the Beta Decay of Polarized Neutrons," *Nucl. Instrum. Meth. A* **440** (3), 539, (2000).
- Kuznicki, S. M., Bell, V. A., Hillhouse, H. W., Braunbarth, C. M., Jacobinas, R. M., Nair, S., Toby, B. H., Tsapatsis, M., "A Titanosilicate Molecular Sieve with Adjustable Pores for Size-Selective Adsorption of Molecules," *Nature* **412**, 720 (2001).
- Lamaze, G. P., Chen-Mayer, H. H., Gerouki, A., and Goldner, R. B., "Analysis of Lithium Transport in Electrochromic Multilayer Films by Neutron Depth Profiling," *Surf. Interface Anal.* **29**, 638 (2000).
- La-Orauttagpong, D., Noheda, B., Ye, Z.-G., Gehring, P. M., Toulouse, J., Cox, D., Shirane, G., "New Phase Diagram for the Relaxor  $(\text{Pb}(\text{Zn}_{1/3}\text{Nb}_{2/3})\text{O}_{3-x}\text{PbTiO}_3)$ ," *Phys. Rev. B*, in press.
- Lee, J. H., Balsara, N. P., Krishnamoorti, R., Jeon, H. S., Hammouda, B., "Designing Balanced Surfactants for Mixtures of Immiscible Polymers," *Macromol.* **34**, 6557 (2001).
- Lee, S.-H., Cheong, S.-W., Yamada, K., Majkrzak, C. F., Aepli, G., "Charge and Canted Spin Order in  $\text{La}_{2-x}\text{Sr}_x\text{NiO}_4$ ," *Phys. Rev. B* **63** (6), 0405 (2001).
- Lee, S.-H., Qiu, Y., Broholm, C., Ueda, Y., Rush, J. J., "Spin Fluctuations in a Magnetically Frustrated Metal  $\text{LiV}_2\text{O}_4$ ," *Phys. Rev. Lett.* **86** (24), 5554 (2001).
- Lee, S.-H., Tranquada, J. M., Yamada, K., Buttrey, D. J., Li, Q., Cheong, S.-W., "Freezing of a Stripe Liquid," *Phys. Rev. Lett.*, in press.
- Lee, Y., Reisner, B. A., Hanson, J. C., Jones, G. A., Parise, J. B., Corbin, D. R., Toby, B. H., Freitag, A., Larese, J. Z., "New Insight Into Cation Relocations Within the Pores of Zeolite Rho: In Situ Synchrotron X-Ray and Neutron Powder Diffraction Studies of Pb- and Cd-Exchanged Rho," *J. Phys. Chem. B* **105** (30), 7188 (2001).

- Lefebvre, A. A., Lee, J. H., Balsara, N. P., Hammouda, B., "Neutron Scattering From Pressurized Polyolefin Blends Near the Limits of Metastability," *Macromol.* **33** (21), 7977 (2000).
- Leighton, C., Fitzsimmons, M. R., Yashar, P., Hoffman, A., Nogues, J., Dura, J., Majkrzak, C. F., Schuller, I. K., "Two-Stage Magnetization Reversal in Exchange Biased Bilayers," *Phys. Rev. Lett.* **86** (19), 4394 (2001).
- Lenhart, J. L., Van Zanten, J. H., Dunkers, J. P., Parnas, R. S., "Interfacial Response of a Fluorescent Dye Grafted to Glass," *Am. Chem. Soc.* **16** (21), 8145 (2000).
- Lenhart, J. L., Van Zanten, J. H., Dunkers, J. P., Parnas, R. S., "Studying the Buried Interfacial Region With an Immobilized Fluorescence Probe," *Macromol.* **34** (7), 2225 (2001).
- Levin, I., Chan, J. Y., Geyer, R. G., Maslar, J. E., Vanderah, T. A., "Cation Ordering Types and Dielectric Properties in the Complex Perovskite  $\text{Ca}(\text{Ca}_{1/3}\text{Nb}_{2/3})\text{O}_3$ ," *J. Solid State Chem.* **156** (1), 122 (2001).
- Levin, I., Chan, J. Y., Maslar, J. E., Vanderah, T. A., Bell, S. M., "Phase Transitions and Microwave Dielectric Properties in the Perovskite-Like  $\text{Ca}(\text{A}_{10.5}\text{Nb}_{0.5})\text{O}_3\text{CaTiO}_3$  System," *J. Appl. Phys.* **90** (2), 904 (2001).
- Liao, C., Choi, S. M., Mallamace, F., Chen, S. H., "SANS Study of the Structure and Integration of L64 Triblock Copolymer Micellar Solution in the Critical Region," *J. Appl. Crystallogr.* **33**, 677 (2000).
- Licci, F., Gauzzi, A., Marezio, M., Huang, Q., Santoro, A., Masini, R., Bougerol-Chaillout, C., Bordet, P., "Effects of Re Substitute on the Structure and Superconductivity of  $\text{Cu}_{1-x}\text{ReBa}_2\text{Cu}_2\text{O}$ ," *Physica C* **355** (3), 267 (2001).
- Likos, C. N., Vaynberg, A., Lowen, H., Wagner, N. J., "Colloidal Stabilization by Adsorbed Gelatin," *Langmuir* **16** (9), 4100 (2000).
- Lin, E. K., Lee, H. J., Bauer, B. J., Wang, H., Wetzel, J. T., Wu, W.-L., "Structure and Property Characterization of Low-k Dielectric Porous Thin Films Determined by X-Ray Reflectivity and Small-Angle Neutron Scattering," "Low Dielectric Constant Materials for IC Applications," edited by P. S. Ho, J. Leu, W.W. Lee, (Springer Publishing Inc.), p. 346.
- Lin, E. K., Lee, H. J., Wang, H., Wu, W.-L., "Structure and Property Characterization of Low-k Dielectric Porous Thin Films Determined by X-Ray Reflectivity and Small-Angle Neutron Scattering," in *Proceedings of the 2000 International Conference on Characterization and Metrology for ULSI Technology* (American Institute of Physics, July 2000), p. 453.
- Lin, E. K., Pochan, D. J., Wu, W.-L., Satija, S. K., "Neutron Reflectivity Measurements of Molecular Mass Effects on Polymer Mobility Near the Polymer/Solid Interface," in *Proceedings of the Materials Research Society Meeting* (April 2000), p.256.
- Lin, E. K., Soles, C. L., Wu, W.-L., Satija, S. K., Lin, Q., Angelopoulos, M., "Neutron Reflectivity Measurements for the Interfacial Characterization of Polymer Thin Films Photoresists," in *Proceedings of the 12th International Conference on Photopolymers*, (Society of Plastics Engineers, Brookfield, CT, 2001), p. 299.
- Lin, E. K., Wu, W.-L., Jin, C., Wetzel, J. T., "Structure and Property Characterization of Porous Low-k Dielectric Constant Thin Films Using X-Ray Reflectivity and Small-Angle Neutron Scattering," in *Proceedings of the Materials Research Society Meeting* (April 2000), p. 425.
- Lin, E. K., Wu, W.-L., Lin, Q. H., Angelopoulos, M., "Feature-Shape and Line-Edge Roughness Measurement of Deep Sub-Micron Lithographic Structures Using Small-Angle Neutron Scattering," *Proceeding of the SPIE 26th Annual International Conference on Microlithography*, in press.
- Lin, M. Y., Peiffer, D. G., Zhang, Y., Rafailovich, M., "Neutron Scattering Applications in Hydrocarbon Materials," *J. Phys. Soc. of Japan.* **70**, 551 (2001).
- Lin, Z., Wu, C., Heller-Zeisler, S., Ondov, J. M., "Chemical Mass Balance of Primary Aerosol Constituents in Baltimore Air," *Atmos. Environ.*, in press.
- Lindstrom, R. M., "Limits for Qualitative Detection and Quantitative Determination," edited by, D. R. Lide, *A Century of Excellence in Measurements, Standards, and Technology* (NIST SP 958), U.S. Govt. Print. Office, Washington, DC, 164-166, 2001.
- Ling, X. S., Park, S. R., McClain, B. A., Choi, S. M., Dender, D. C., Lynn, J. W., "Superheating and Supercooling of Vortex Matter in a Nb Single Crystal: Direct Evidence for a Phase Transition at the Peak Effect From Neutron Diffraction," *Phys. Rev. Lett.* **86** (4), 712 (2001).
- Lising, L. J., Hwang, S. R., Adams, J. M., Bowles, T. J., Browne, M. C., Chupp, T. E., Coulter, K. P., Dewey, M. S., Freedman, S. J., Fujikawa, B. K., Garcia, A., Greene, G. L., Jones, G. L., Mumm, H. P., Nico, J. S., Richardson, J. M., Robertson, R. G. H., Steiger, T. D., Teasdale, W. A., Thompson, A. K., Wasserman, E. G., Wietfeldt, F. E., Welsh, R. C., Wilkerson, J. F., "New Limit on the D Coefficient in Polarized Neutron Decay," *Am. Phys. Soc.* **62** (5), 5501 (2000).
- Liu, W. J., Jeng, U., Lin, T. L., Lai, S. H., Shih, M. C., Tsao, C. S., Chiang, L. Y., Sung, L. P., "Adsorption of Dodecahydroxylated-Fullerene Monolayers at the Air-Water Interface," *Physica B* **283** (1), 49 (2000).
- Livingston, R., Neumann, D. A., Allen, A. J., Fitzgerald, S. A., Berliner, R., "Application of Neutron Scattering to Portland Cement," *Neutron News* **11** (4), 18 (2000).
- Loureiro, S. M., Felser, C., Huang, Q., Cava, R. J., "Refinement of the Crystal Structures of Strontium Cobalt Oxychlorides by Neutron Powder Diffraction," *Chem. Mat.* **12** (10), 3181 (2000).
- Luchette, P. A., Vetman, T. N., Prosser, R. S., Hancock, R. E. W., Nieh, M.-P., Glinka, C. J., Krueger, S., Katsara, S. J., "Morphology of Fast Tumbling Bicelles: A Small Angle Neutron Scattering and NMR Study," *Bioch. Et Biophys. Acta* **1513** (2), 83 (2001).
- Lynch, M. L., Wireko, F., Tarek, M., Klein, M., "Intermolecular Interactions and the Structure of Fatty Acid-Soap Crystals," *J. Phys. Chem. B* **105**, 552 (2001).
- Lynn, G. W., Dadmun, M. D., Wu, W.-L., Lin, E. K., Wallace, W. E., "Neutron Reflectivity Studies of the Interface Between a Small Molecule Liquid Crystal, and a Polymer," *Liquid Crystals*, in press.
- Lynn, J. W., "Neutron Studies of Exchange-Coupled Superconductors," in *Proceedings of the NATO Advanced Research Workshop* (June 13-18th), **14**, 121 (2001).

- Lynn, J. W., Canfield, P. C., Hilsher, G., Muller, K. H., Narooznyi, V. N., "Progress in Borocarbide Research," in *Proceedings of the NATO Conference*, **14**, 431 (2001).
- Lynn, J. W., "Spin Dynamics in the Ferromagnetic Phase of Colossal Magnetoresistive Oxides," *J. Supercond. Novel Magn.* **13** (2), 263 (2000).
- Lynn, J. W., "Magnetic Neutron Scattering," in *Methods in Materials Research*, edited by E. N., Kaufman, R. Abbaschian, A., Bocarsly, C.-L., Chien, D. Dollimore, B., Doyle, A. Goldman, R., Gronsky, S. Pearson, J. Sanchez, (John Wiley & Sons, 2000), chap. 13.
- Lynn, J. W., Adams, C. P., Mukovskii, Y. M., Arsenov, A. A., Shulyatev, D. A., "Charge Correlations in the Magnetoresistive Oxide  $\text{La}_{0.7}\text{Ca}_{0.3}\text{MnO}_3$ ," *J. Appl. Phys.* **89** (11), 6846 (2001).
- Lynn, J. W., Skanthakumar, S., "Neutron Scattering Studies of Lanthanide Magnetic Ordering," in *Handbook on the Physics and Chemistry of Rare Earths*, edited by K. A. Gschneider, Jr., L. Eyring, and M. B. Maple (Elsevier Science, 2001), p. 315
- Lynn, J. W., Huang, Q., Santoro, A., Borchers, J. A., Erwin, R. W., "Magnetic Structure Determinations at NBS/NIST," *J. Res. Natl. Inst. Stan.*, in press.
- Magid, L. J., Li, Z., Butler, P. D., "Flexibility of Elongated Sodium Dodecylsulfate Micelles in Aqueous Sodium Chloride: A Small-Angle Neutron Scattering Study," *Langmuir* **16** (26), 10028 (2000).
- Majkrzak, C. F., "Applications of Specular Neutron Reflectometry in Materials Science," *J. Neutron Res.* **7**, 159 (2000).
- Majkrzak, C. F., Berk, N. F., "Advances in Specular Neutron Reflectometry," *J. Appl. Phys.*, in press.
- Majkrzak, C. F., Berk, N. F., Krueger, S., Dura, J. A., Tarek, M., Tobias, D., Silin, V., Meuse, C. W., Woodward, J., Plant, A. L., "First-Principles Determination of Hybrid Bilayer Membrane Structure by Phase-Sensitive Neutron Reflectometry," *Biophysical J.* **79** (6), 3330 (2000).
- Majkrzak, C. F., Satija, S. K., Berk, N. F., Krueger, S. K., Borchers, J. A., Dura, J. A., Ivkov, R., O'Donovan, K., "Neutron Reflectometry at the NCNR," *Neutron News* **12**, 25 (2001).
- Manley, M. E., Fultz, B., McQueeney, R. J., Brown, C. M., Hults, W. L., Smith, J. L., Thomas, D. J., Osborn, R., Robertson, J. L., "Large Harmonic Softening of the Phonon Density of States of Uranium," *Phys. Rev. Lett.* **86** (14), 3076 (2001).
- Manson, J. L., Huang, Q., Lynn, J. W., Koo, H., Whangbo, M., Bateman, R., Wada, N., Awaga, K., Argyriou, D. N., Miller, J. S., "Long-Range Magnetic Order in  $\text{Mn}[\text{N}(\text{CN})_2]_2$ (pyz) {pyz = pyrazine}: Susceptibility, Magnetization, Specific Heat and Neutron Diffraction Measurements and Electronic Structure Calculations," *J. Am. Chem. Soc.* **123** (1), 162 (2001).
- Maranzano, B. J., Wagner, N. J., "The Effects of Interparticle Interactions and Particle Size on Reversible Shear Thickening: Hard-Sphere Colloidal Dispersions," *J. Rheol.* **45** (5), 1205 (2001).
- Maranzano, B. J., Wagner, N. J., "The Effects of Particle Size on Reversible Shear Thickening of Concentrated Colloidal Dispersions," *J. Chem. Phys.* **114** (23), 10514 (2001).
- Maranzano, B. J., Wagner, N. J., Fritz, G., Glatter, O., "Surface Charge of 3-(trimethoxysilyl) Propyl Methacrylate (TPM) Coated Stober Silica Colloids by Zeta-PALS and SANS," *Langmuir* **16**, 10556 (2000).
- Martter, T. D., Foster, M. D., Yoo, T., Xu, S., Lizzaraga, G., Quirk, R. P., Butler, P. D., "Determination of the Thermodynamics Interaction Parameter for Blends of Star and Linear Polybutadiene," *Macromol.*, in press.
- Matejicek, J., Ilavsky, J., Gnäupel-Herold, T., "Neutron Scattering in Studies of Complex Anisotropic Microstructure," in *Proceedings 3rd International Conference on Materials Structure and Micromechanics of Fracture*, edited by Sandera, P., (Vutium, Brno, CZ, 2001), p. 502.
- Matejicek, J., Sampath, S., Gnäupel-Herold, T., Prask, H. J., "Processing Effects on Residual Stress in Sprayed Ni+5%Al Coatings – Comparison of Different Spraying Methods," in *Proceedings of the International Thermal Spray Conference*, edited by C. C., Berndt, (Materials Park, OH, 2001), p. 351.
- Maxelon, M., Pundt, A., Pyckhout-Hintzen, W., Barker, J., Kirchheim, R., "Interaction of Hydrogen and Deuterium With Dislocations in Palladium as Observed by Small Angle Neutron Scattering," *Acta Mater.* **49** (14), 2625 (2001).
- Maxelon, M., Pundt, A., Pyckhout-Hintzen, W., Kirchheim, R., "Small Angle Neutron Scattering of Hydrogen Segregation at Dislocations in Palladium," *Scripta Materialia* **44** (5), 817 (2001).
- McKinley, J. P., Serne, R. J., Zachara, J. M., Schaef, H. T., Zeissler, C. J., Lindstrom, R. M., "The Distribution of Retention of  $^{137}\text{Cs}$  in Sediments at the Hanford Site," *Environmental Science and Technology*, in press.
- McKelvey, C. A., Kaler, E. W., "Characterization of Nanostructured Hollow Polymer Spheres with Small-Angle Neutron Scattering (SANS)," *Colloid and Interface Sci.*, in press
- McKelvey, C. A., Kaler, E. W., Zasadzinski, J. A., Coldren, B., Jung, H. T., "Templating Hollow Polymeric Spheres from Catanionic Equilibrium Vesicles: Synthesis and Characterization," *Langmuir* **16**, 8285 (2000).
- McLaughlin, J. C., Neumann, D. A., Gress, D. L., Livingston, R. A., "Non-Destructive Measurement of Freeze/Thaw Cycles in Cement Paste Using Quasi-Elastic Neutron Scattering," in *Proceedings of the Third International Conference on Concrete Under Severe Conditions*, edited by N. Banthia, K. Sakai, O. E. Gjorv, (The University of British Columbia, Vancouver, Canada, 2001), p. 1408.
- Michels, A., Weissmuller, J., Wiedenmann, A., Pedersen, J. A., Barker, J. G., "Measuring the Exchange-Stiffness Constant of Nanocrystalline Solids by Elastic Small-Angle Neutron Scattering," *Phil. Mag. Lett.* **80** (12), 785 (2000).
- Mildner, D. F. R., "Time Focusing of Pulsed-Source Crystal Analyzer Spectrometers II. Practical Expressions," *J. Nucl. Instrum. & Meth.*, in press.
- Mildner, D. F. R., "Neutron Optics," in *The Handbook of Optics III, X-Ray and Neutron Optics*, edited by W. M. Gibson, C. A. MacDonald, (Optical Society of America, McGraw-Hill Publishing, New York, NY, 2001), p. 36.
- Mildner, D. F. R., Carpenter, J. M., "Time Uncertainty for Guided Long Wavelength Neutrons on a Pulsed Source," *J. Nucl. Instrum. & Meth. A*, in press.
- Mildner, D. F. R., Arif, M., Werner, S. A., "Neutron Transmission Through Pyrolytic Graphite Monochromators," *J. Appl. Cryst.* **34** (3), 258 (2001).

- Mombru, A. W., Pardo, H., Suescum, L., Toby, B. H., Ortiz, W. A., Negreira, C. A., Araujo-Moreira, F. M., "Influence of Oxygen Disorder on the Magnetic Properties of LaBaCuFeO<sub>5+δ</sub>: an EXAFS and Neutron Diffraction Study," *Physica C* **356** (1), 149 (2001).
- Mook, H. A., Dai, P., Hayden, S. M., Hiess, A., Lee, S.-H., Dogan F., "Polarized Neutron Beam Observation of Antiferromagnetic Order in Yba<sub>2</sub>Cu<sub>3</sub>O<sub>6.6</sub>," *Science*, in press.
- Nair, S., Tsapatsis, M., Toby, B. H., Kuznicki, S. M., "A Study of Heat-Treatment Induced Framework Contraction in Sr-ETS-4 by Powder Neutron Diffraction and Vibrational Spectroscopy," *J. Am. Chem. Soc.*, in press.
- Nakatani, A. I., "Chain Dimensions in Polysilicate-Filled Poly(Dimethylsiloxane)," in *Proceedings of the International Journal of Thermophysics, 14th Symposium on Thermophysical Properties*, (Boulder, CO), in press.
- Nakatani, A. I., Chen, W., Schmidt, R. G., Gordon, G. V., Han, C. C., "Chain Dimensions in Polysilicate-Filled Poly(Dimethylsiloxane)," *Polymer* **42** (8), 3713 (2001).
- Nakatani, A. I., Ivkov, R., Papanek, P., Jackson, C. L., Yang, H., Nikiel, L., Gerspacher, M., Krishnamoorti, R., "The Significance of Percolation in the Dynamics of Polymer Chains Bound to Carbon Black," in *Proceedings of the Filled and Nanocomposite Polymer Materials*, edited by A. Nakatani, Hjelm, I., Gerpacher, M., Krishnamoorti, R. P., (Materials Research Society, Pittsburgh, 2001), in press.
- Nakatani, A. I., Ivkov, R., Papanek, P., Yang, H., Gerspacher, M., "Inelastic Neutron Scattering From Filled Elastomers," *Rubber Chem. Technol.* **73** (5), 847 (2000).
- Nico, J. S., Abdurashitov, J. N., Gavrin, V. N., Girin, S. V., Gorbachev, V. V., Ibragimova, T. V., Kalikhov, A. V., Khairnasov, N. G., Knodel, V. N., Mirmov, I. N., Shikhin, A., Verentenkin, E. P., Vermul, V. M., Yants, V. E., Zatsepin, G. T., Bowles, T. J., Teasdale, W. A., Wark, D. L., Cherry, M. L., Cleveland, B. T., Davis, R., Lande, K., Wildenhain, P. S., Elliott, S. R., Wilkerson, J. F., "Solar Neutrino Results From SAGE," in *Proceedings of the 10th International Baksan School: Particles and Cosmology*, edited by E. N. Alexeev, V. A. Matveev, K. H. S., Nirov, V. A. Rubakov, (Institute for Nuclear Research of the Russian Academy of Sciences, Moscow, 2000), in press.
- Nieh, M.-P., Glinka, C. J., Krueger, S., Prosser, R. S., Katsaras, J., "A SANS Study on the Effect of Lanthanide Ions and Charged Lipids on the Morphology of Phospholipid Mixtures," *Biophys. J.*, in press.
- Nieh, M.-P., Glinka, C. J., Krueger, S., Prosser, R. S., Katsaras, J., "SANS Study of the Structural Phases of Magnetically Alignable Phospholipid Mixtures," *Langmuir* **17** (9), 2629 (2001).
- Nieh, M.-P., Kumar, S., Ho, D., Briber, R. , "Neutron Scattering of Polymer Conformations in Energetic Neutral Pores of the Vycor," *Macromol.*, in press.
- Ngai, K. L., Soles, C. L., Bao, L., Yee, A. F., "Correlations of Positron Annihilation and Other Dynamic Properties in Small Molecule Glass-Forming Substances," *Phys. Rev. Lett.* **87** (21), 901 (2001).
- Norman, B. R., Iyengar, G. V., "Further Applications of Pre-Irradiation Combustion and Neutron Activation Analysis Technique for the Determination of Iodine in Food and Environmental Reference Materials: Merits and Demerits," *Fresen. J. Anal. Chem.*, in press.
- O'Donovan, K. V., Borchers, J. A., Majkrzak, C. F., Hellwig, O., Fullerton, E. E., "Extracting Buried Twists With Polarized Neutron Reflectometry," *Appl. Phys. Lett.* A, in press.
- O'Donovan, K. V., Borchers, J. A., Majkrzak, C. F., Hellwig, O., Fullerton, E. E., "Pinpointing Chical Structures Using Front/ Back Polarized Neutron Reflectivity," *Phys. Rev. Lett.*, in press.
- Ohwada, K., Hirota, K., Rehrig, P. W., Gehring, P. M., Noheda, B., Fujii, Y., EaglePark, S.-E., Shirane, G., "Neutron Diffraction Study of the Irreversible R-MA-MC Phase Transition in Single Crystal Pb[(Zn<sub>1/3</sub> Nb<sub>2/3</sub>)<sub>1-x</sub> Ti<sub>x</sub>]O<sub>3</sub>," *J. Phys. Soc. Japan.* **70** (9), 429 (2001).
- Olson, D. H., Toby, B. H., Reisner, B. A., "Neutron Diffraction Study of Protons in Four Lanthanum Exchanged X and LSX Zeolites," in *Proceedings of the 13th International Zeolite Congress*, in press.
- Ondov, J. M., Caffrey, P. F., Suarez, A. E., Borgoul, P. V., Holsen, T., Paode, R. D., Sofuooglu, S. C., Sivadechathep, J., Lu, J., Kelly, M. J., Church, T., Scudlark, J., "Atmospheric Deposition of Trace Elements to Lake Michigan: Influence of Urban and Industrial South Shore Sources," *Environ. Sci. Technol.*, in press.
- Papanek, P., Fischer, J. E., Sauvajol, J. L., Dianoux, A. J., McNeillis, P. M., Mathis, C., Francois, B., "Low-Frequency Phonons in Pristine and Doped Phases of Polyacetylene: An Inelastic Neutron Scattering Study," *J. Chem. Phys.*, in press.
- Papanek, P., Kamitakahara, W. A., Zhou, P., Fischer, J. E., "Neutron Scattering Studies of Disordered Carbon Anode Materials," *J. Phys. Condens. Mat.* **13**, 8287 (2001).
- Paul, R. L., "Development of a Procedure for Measuring Nitrogen by Cold Neutron Prompt Gamma-Ray Activation Analysis," *Analyst* **126** (2), 217 (2001).
- Paul, R. L., "Determination of Nitrogen in Some Reference Materials by Cold Neutron Prompt Gamma-Ray Activation Analysis," *J. Radioanal. Nucl. Chem.*, in press.
- Paul, R. L., "Nitrogen in Some Reference Materials by Cold Neutron Prompt Gamma-Ray Activation Analysis," *Analyst*, in press.
- Paul, R. L., "Nondestructive Measurement of Hydrogen and Other Elements by Cold Neutron Capture Prompt Gamma-Ray Activation Analysis," *Geostandards Newsletter*, in press.
- Paul, R. L., "Reference Minerals for Microanalysis of Light Elements," *Geostandards Newsletter*, in press.
- Paul, R. L., Chen-Mayer, H. H., Lindstrom, R. M., "Characterization of Hydrogen in Concrete by Cold Neutron Prompt Gamma-Ray Activation Analysis and Incoherent Scattering," in *Proceedings Nondestructive Methods and Materials Characterization*, edited by G. Y. Baaklini, N. Meyendorf, T. E. Matikas, R. S. Gilmore (Matls. Res. Soc., Warrendale, PA, 2000), p.175.
- Paul, R. L., Simons, D. S., "Neutron Activation Analysis for Calibration of Phosphorus Implantation Dose," in *Proceedings of the Characterization and Metrology for ULSI Technology*, edited by D. G. Seiler, A. C. Diebold, W. M. Bullies, T. J. Shaffner, R. McDonald, E. J. Walters (American Institute of Physics, Woodbury, NY, 2001), p. 677.
- Payne, A. C., Sprauve, A., Olmstead, M. M., Kauzlarich, S. M., Chan, J. Y., Reisner, B. A., Lynn, J. W., "Synthesis, Magnetic, and Electronic Properties of Single Crystals of EuMn<sub>2</sub>P<sub>2</sub>," *J. Solid State Chem.*, in press.

- Pelton, R., Richardson, R., Cosgrove, T., Ivkov, R., "The Effects of Temperature and Methanol Concentration on the Properties of Poly(N-Isopropylacrylamide) at the Air-Solution Interface," *Langmuir* **17** (16), 5118 (2001).
- Perez-Salas, U., Nasser, L., Briber, R. M., Hamilton, W. A., Rafailovich, M. H., Sokolov, J., "Polystyrene Network Interdiffusion," *Macromol.*, in press.
- Perez-Salas, U., Briber, R. M., Rafailovich, M. H., Sokolov, J., "Interfacial Fracture Toughness Between Glassy Polymer Networks," *J. of Polym. Sci. Part B: Poly. Phys.*, in press.
- Petrash, S., Cregger, T., Zhao, B., Pokidysheva, E., Foster, M. D., Brittain, W. J., Sevastinov, V., Majkrzak, C. F., "Changes in Protein Adsorption on Self-Assembled Monolayers with Monolayer Order: Comparison of Human Serum Albumin and Human Gamma Globulin," *Langmuir*, in press.
- Pivovar, A. M., Ward, M. D., Yildirim, T., Neumann, D. A., "Vibrational Mode Analysis of Isomorphous Hydrogen-Bonded Guanidinium Sulfonates With Inelastic Neutron Scattering and Density Functional Theory," *J. Chem. Phys.* **115** (4), 1909 (2001).
- Plazanet, M., Johnson, M. R., Gale, J. D., Yildirim, T., Kearley, G. J., Trommsdorff, H. P., Fernandez-Diaz, M. T., Sanchez-Portal, D., Artacho, E., Soler, J. M., Ordejon, P., Garcia, A., "The Structure and Dynamics of Crystalline Durene by Neutron Scattering and Numerical Modeling Using Density Functional Methods," *Chem. Phys.* **261** (1), 189 (2000).
- Pochan, D. J., Lin, E. K., Satija, S. K., Wu, W.-L., "Thermal Expansion of Supported Thin Polymer Films: A Direct Comparison of Free Surface vs Total Confinement," *Macromol.* **34** (9), 3041 (2001).
- Pochan, D. J., Lin, E. K., Wu, W.-L., "Surface Directed Crystallization and Autophobic in Semicrystalline Polymer Thin Films," *Phys. Rev. Lett.*, in press.
- Pochan, D. J., Lin, E. K., Wu, W.-L., Satija, S. K., Cheng, S. Z. D., "Thermal Expansion and Glass Transition Behavior of Thin Polymer Films With and Without a Free Surface via Neutron Reflectometry," in *Proceedings of the Dynamics in Small Confining Systems IV*, edited by J. M. Drake, G. S. Grest, J. Klafter, R. Kopelman, MRS Symp. Series 543, (Materials Research Society, Warrendale, PA, 1999), p. 163.
- Pochan, D. J., Pakstis, L., Nowak, A. P., Deming, T. J., "Self-Assembled Polypeptide Hydrogels; Morphology and Cytotoxicity," *Biomacromol.*, in press.
- Popovici, M., Stoica, A., Hubbard, C., Spooner, S., Prask, H., Gnäupel-Herold, T., Gehring, P., Erwin, R., "Multi-Wafer Focusing Neutron Monochromators and Applications," in *Proceedings of the SPIE Optical Science and Technology*, in press.
- Porcar, L., Hamilton, W. A., Butler, P. D., Warr, G. G., "A New Vapor Barrier Couette Shear Cell, for Small Angle Neutron Scattering Measurements," *Rev. Sci. Instrum.*, in press.
- Prask, H. J., Brand, P. C., Gnäupel-Herold, T., Hicho, G. E., "Determination of Residual Stresses Using Neutron Diffraction: Tank-Car Welds and Rail Slices," in ASNT's Topics on Nondestructive Evaluation Series, in press.
- Prask, H. J., Gnäupel-Herold, T., "Materials Science Using Neutron," in *Proceedings Transactions of the American Nuclear Society, American Nuclear Society* (Washington, DC, November 12–16, 2000) **83**, 495 (2000).
- Prask, H. J., Gnäupel-Herold, T., Fisher, J. W., Cheng, X., Stuart, J. T., "Residual Stress Modification by Means of Ultrasonic Impact Treatment," in *Proceedings of the 2001 SEM Annual Conference & Exposition on Experimental and Applied Mechanics*, in press.
- Quijada, M. A., Simpson, J. R., Drew, H. D., Lynn, J. W., Vasiliu-Doloc, L., Mukovskii, Y. M., Karabashev, S. G., "Temperature Dependence of Low-Lying Electronic Excitations of LaMnO<sub>3</sub>," *Phys. Rev.* **B64**, in press.
- Raghavan, S. R., Edlund H., Kaler, E. W., "Cloud-Point Phenomena in Wormlike Micellar Systems Containing Cationic Surfactant and Salt," *Langmuir*, in press.
- Raghavan, S. R., Kaler, E. W., "Highly Viscoelastic Wormlike Micellar Solutions Formed by Cationic Surfactants With Long Unsaturated Tails," *Langmuir* **17**, 300 (2001).
- Reidy, R. F., Allen, A. J., Krueger, S., "Small Angle Neutron Scattering Characterization of Colloidal and Fractal Aerogels," *J. Non Cryst. Solids* **285** (1), 181 (2001).
- Reisner, B. A., Lee, Y., Hanson, J. C., Jones, G. A., Parise, J. B., Corbin, D. R., Toby, B. H., Freitag, A., Larese, J. Z., Kahlenberg, V., "Understanding Negative Thermal Expansion and Trap Door Cation Relocations in Zeolite Rho," *Chem. Comm.* **22**, 2221 (2000).
- Reisner, B. A., Tripathi, A., Parise, J. B., " $\text{Na}_8[\text{Zn}_4\text{Ge}_8\text{O}_{18}(\text{OH})_{12}] \cdot 2\text{H}_2\text{O}$ : An Interrupted-Framework Zincogermanate Built From  $[\text{GeO}_3(\text{OH})]$  and  $[\text{Ge}_2(\text{OH})_2]$  Units," *J. Mater. Chem.* **11**, 887 (2001).
- Rich, D. R., Fan, S., Gentile, T. R., Hussey, D., Jones, G. L., Neff, B., Snow, W. M., Thompson, A. K., "Polarized <sup>3</sup>He Neutron Spin Filter Development and Application at Indiana University and NIST," *Physica B*, in press.
- Rols, S., Benes, Z., Anglaret, E., Sauvajol, J. L., Papanek, P., Fischer, J. E., Coddens, G., Schober, H., Dianoux, A. J., "Phonon Density of States of Single-Wall Carbon Nanotubes," *Phys. Rev. Lett.* **85** (24), 5222 (2000).
- Rosenkranz, S., Osborn, R., Vasiliu-Doloc, L., Lynn, J. W., Sinha, S. K., Mitchell, J. F., "Observation of Kosterlitz-Thouless Spin Correlations in the Colossal Magnetoresistive Layered Manganite  $\text{La}_{1.2}\text{Sr}_{1.8}\text{Mn}_2\text{O}_7$ ," *Phys. Rev. Lett.*, in press.
- Rossbach, M., Zeisler, R., "Certified Reference Materials for Microanalytical Methods," in *Proceedings of the Reference Materials for Chemical Analysis Certification, Availability, and Proper Usage*, edited by M. Stoepller, W. R. Wolf, P. Jenks, (Wiley-VCH Verlag Chemie, Weinheim, Germany, 2001), p. 127.
- Salamat, G., De Vries, R., Kaler, E. W., Satija, S., Sung, L., "Undulations in Salt-Free Charged Lamellar Phases Detected by Small-Angle Neutron Scattering and Neutron Reflectivity," *Langmuir* **16**, 102 (2000).
- Sankar, S., Dender, D., Borchers, J. A., Smith, D. J., Erwin, R. W., Kline, S. R., Berkowitz, A. E., "Magnetic Correlations in Non-Percolated Co-SiO<sub>2</sub> Granular Films," *J. Magn. Magn. Mater.* **221** (1), 1 (2000).
- Santoro, A., "Neutron Crystallography at NBS/NIST," ACA Newsletter, in press.
- Sayer, E. V., Yener, A. K., Joel, E. C., Blackman, M. J., Özbal, H., "Stable Lead Isotope Studies of Black Sea Anatolian Ore Sources and Related Bronze Age and Phrygian Artifacts From Nearby Archaeological Sites Appendix: New Central Taurus Ore Data," *Archaeometry*, in press.

- Schirber, J. E., Morosin, B., Kwei, G. H., Yildirim, T. A., Fischer, J. E., Jorgensen, J. D., "Superconductivity in the Polymeric Phase of  $\text{Na}_2\text{CsC}_{60}$ ," *Physica C* **353**, 207 (2001).
- Schmidt, G., Nakatani, A. I., Butler, P. D., Ferreiro, V., Karim, A., Han, C. C., "Polymer-Clay Nanocomposite Materials, Solution and Bulk Properties," in *Proceedings of the Materials Research Society Symposium*, (2001), p. 20.
- Schmidt, G., Nakatani, A. I., Butler, P. D., Karim, A., Han, C. C., "Shear Orientation of Viscoelastic Polymer-Clay Solutions," in *Proceedings of the XIIth International Congress on Rheology* (Cambridge, UK, 2000), p. 122.
- Schober, H., Losert, C., Mezei, F., Cook, J. C., "Chopper Cascades: An Analytical Treatment of the Contamination Problem," *J. Neutron Res.* **8**, 175 (2000).
- Schulz, J. C., Warr, G. G., Butler, P. D., Hamilton, W. A., "Adsorbed Layer Structure of Cationic Surfactants on Quartz," *Phys. Rev. E* **63** (4), 1604 (2001).
- Schwickert, B. E., Kline, S. R., Zimmermann, H., Lantzky, K. M., Yarger, J. L., "Early Stages of Glacial Clustering in Supercooled Triphenyl Phosphite," *Phys. Rev. B* **64** (4), 5410 (2001).
- Sharpless, K. E., Colbert, J. C., Greenberg, R. G., Schantz, M. M., Welch, M. J., "Recent Developments in Good-Matrix Reference Materials at NIST," *Fres. J. Anal. Chem.* **370**, 275 (2001).
- Shin, K., Zhang, Y., White, H., Rafailovich, M. H., Sokolov, J., Peiffer, D., "Organoclay Nanoplatelets at the Air/Water Interface," *Mat. Res. Soc. Symp.* KK8.4 (2001).
- Shin, K., Hu, X., Zheng, X., Rafailovich, M. H., Sokolov, J., Zaitsev, V., Schwartz, S. A., "Silicon Oxide Surface as a Substrate for Polymer Thin Films," *Macromol.* **34** (14), 4993 (2001).
- Shin, K., Pu, Y., Rafailovich, M., Sokolov, J., Seeck, O. H., Tolan, M., Sinha, S., "Corrected Surfaces of Free Standing Polystyrene Thin Films," *Macromol.* **34** (16), 5620 (2001).
- Shin, K., Rafailovich, M. H., Sokolov, J., Change, D. M., Cox, J. K., Lennox, R. B., Eisenberg, A., Huang, J., Hsu, S. L., Satija, S., "Observation of Surface Ordering of Alkyl Side Chains in Polystyrene/Polyelectrolytes Diblock Copolymer Langmuir Films," *Langmuir* **17** (16), 4955 (2001).
- Shin, K., Rafailovich, M., Sokolov, J., Nguyen, D., Yang, N.-L., Eisenburg, A., Satija, S. K., "Ionomer Thin Films in Mixed Solvent," *Langmuir* **21**, 6675 (2001).
- Shirane, G., Gehring P. M., "Soft Phonon Anomalies in Relaxor Ferroelectrics," *J. Phys. Soc. Jpn.* **84** (22), 5216 (2000).
- Silas J. A., Kaler, E. W., "Multiple Scattering from Efficient Microemulsions," *Colloid and Interface Sci.*, in press.
- Sitepu, H., Prask, H. J., "Use of Generalized Spherical-Harmonic Method for Describing Preferred Orientation With Neutron Powder Diffraction Data," *J. Mater. Sci.*, in press.
- Sitepu, H., Prask, H. J., Vaudin, M. D., "Texture Characterization in X-Ray and Neutron Powder Diffraction Data Using the Generalized Spherical-Harmonic," *Advances in X-Ray Analysis* **44**, 241 (2001).
- Sitepu, H., Schmahl, W. W., Stalick, J. K., "Use of Generalized Spherical-Harmonic Model for Describing Texture in NiTi Shape Memory Alloy by Neutron Diffraction," *Appl. Phys. A*, in press.
- Skripov, A. V., Cook, J. C., Udovic, T. J., Kozhanov, V. N., "Quasielastic Neutron Scattering Study of Hydrogen Motion in C15-Type  $\text{HfMo}_2\text{H}_{0.26}$ ," *Phys. Rev. B* **62** (21), 14099 (2000).
- Skripov, A. V., Cook, J. C., Udovic, T. J., Kozhanov, V. N., Hempelmann, R., "Quasielastic Neutron Scattering Studies of H Motion in Laves-Phase Compounds," *Appl. Phys. A*, in press.
- Smee, S. A., Brand, P. C., Barry, D. D., Broholm, C. L., Anand, D. K., "An Elastic, Low-Background Vertical Focusing Element for a Doubly Focusing Neutron Monochromator," *Nucl. Instrum. Methods A* **466** (3), 513 (2001).
- Smee, S. A., Orndorff, J. D., Scharfstein, G. A., Qiu, Y., Brand, P. C., Broholm, C. L., Anand, D. K., "MACS Low Background Doubly Focusing Neutron Monochromator," *Appl. Phys. A*, in press.
- Snow, W. M., Chowduri, Z., Dewey, M. S., Fei, X., Gilliam, D. M., Greene, G. L., Nico, J. S., Wietfeldt, F. E., "A Measurement of the Neutron Lifetime by Counting Trapped Protons," *Nucl. Instrum. Meth. A* **440** (3), 528 (2000).
- Sokolov, M. A., Spooner, S. E., Odette, G. R., Wirth, B. D., Lucas, G. E., "SANS Study of High-Copper RPV Welds in Irradiated and Annealed Conditions," in *Proceedings of the Effects of Radiation on Materials: 18th International Symposium*, ASTM 1325, edited by R. K. Nanstad, M. L. Hamilton, F. A. Garner, A. S. Kumar (ASTM, West Conshohocken, PA, 1999), p. 333.
- Soles, C. L., Dimeo, R. M., Neumann, D. A., Kisliuk, A., Sokolov, A. P., Liu, J., Yee, A. F., Wu, W.-L., "Correlations of the Boson Peak with Annihilation in Series of Polycarbonate Copolymers," *Macromol.* **34** (12), 4082 (2001).
- Soles, C. L., Douglas, J. F., Wu, W.-L., Dimeo, R. M., "Incoherent Neutron Scattering and the Dynamics of Confined Polycarbonate Films," *Phys. Rev. E*, in press.
- Soles, C. L., Douglas, J. F., Wu, W.-L., Penh, H., Gidley, D. W., "A Broad Perspective on Dynamics of Highly Confined Polymer Films," in *Proceedings of the MRS (Nov. 2001)*, in press.
- Soles, C. L., Lin, E. K., Lehart, J. L., Jones, R. L., Wu, W.-L., Goldfarb, D., Angelopoulos, M., "Thin Film Confinement Effects on the Thermal Properties of Model Photoresist Polymers," *J. Vac. Sci. Technol.*, in press.
- Stancik, C. M., Pople, J. A., Hedrick, J. L., Gast, A. P., "Novel Dendrimer-like Star Copolymer Architectures Investigated With Scattering Techniques," *Polymeric Materials: Science & Engineering*, **85**, 127 (2001).
- Steinle-Neumann, G., Stixrude, L., Cohen, R. E., Gulseren, O., "Elasticity of Iron at High Pressure and Temperature: Implications for the Earth's Inner Core," *Nature* **413**, 57 (2001).
- Stone, M. B., Rittner, J., Chen, Y., Yardimci, H., Reich, D. H., Broholm, C., Ferraris, D. V., Lectka, T., "Frustrated 3-Dimensional Quantum Spin Liquid in CuHpCl," *Phys. Rev. B*, in press.
- Stone, M. B., Zaliznyak, I. A., D. H., Reich, Broholm, C., "Frustration Induced Quantum Disordered Phase in Two Dimensional Heisenberg Antiferromagnet Piperazinium Hexachlorocuprate," *Phys. Rev. B* **64** 144405 (2001).
- Strelitzky, K. A., Zvinevich, Y., Wyslouzil, B. E., "Controlling Nucleation and Growth of Nanodroplets in Supersonic Nozzles," *J. Chem. Phys.*, in press.
- Suarez, A. E., Ondov, J. M., "Atmospheric Deposition of Trace Elements to the Chesapeake Bay: Influence of Urban and Industrial Sources in Baltimore," *Environ. Sci. Tech.*, in press.
- Sung, L., Karim, A., Douglas, J. F., Han, C. C., "Modification of Thin Film Phase Separation by a Surfactant," *Macromol.*, in press.

- Tarek, M., Tobias, D. J., "The Dynamics of Protein Hydration Water: A Quantitative Comparison of Molecular Dynamics Simulations and Neutron Scattering Experiments," *Biophys. J.* **79** (6), 3244 (2000).
- Tarek, M., Tobias, D. J., "Effects of Solvent Damping on Side Chain and Backbone Contributions to the Protein Boson Peak," *J. Chem. Phys.* **115** (3), 1607 (2001).
- Terry, J. S., Heller-Zeisler, S., Ondoc, J. M., "Behavior of Three Atmospheric Tracer Materials in a Pilot-Scale Coal Combuster," *J. Radio. Analyst. Nuc. Chem.*, in press.
- Thomas, J. J., Neumann, D. A., Fitzgerald, S. A., Livingston, R. A., "The State of Water in Hydrating Tricalcium Silicate and Portland Cement Pastes as Measured by Quasi-Elastic Neutron Scattering," *J. Am. Ceram. Soc.* **84** (8), 1811 (2001).
- Toby, B. H., "The Classification of Powder Diffraction Data," International Tables for Crystallography, in press.
- Toby, B. H., "Diffraction Analysis and Crystallographic Structure Determination," *Handbook of Ceramic Engineering*, edited by M. N. Rahaman, in press.
- Toby, B. H., "EXPGUI, a Graphical User Interface for GSAS," *J. Appl. Crystallgr.* **34**, 210 (2001).
- Toby, B. H., "Structural Studies of Zeolitic Materials With the NIST BT-1 Neutron Powder Diffractometer," *Neutron News*, **12** (2), 30 (2001).
- Trollas, M., Atthof, B., Wursch, A., Hedrick, J. L., Pople, J. A., Gast, A. P., "Constitutional Isomers of Dendrimer-Like Star Polymers: Design, Synthesis, and Conformational and Structural Properties," *Macromol.* **33**, 6423 (2000).
- Truong, M. T., Walker, L. M., "Controlling the Shear-Induced Structural Transition of Rodlike Micelles Using Nonionic Polymer," *Langumir* **16**, 7991 (2000).
- Tsai, A. M., Neumann, D. A., Bell, L. N., "Molecular Dynamics of Solid-State Lysozyme as Affected by Glycerol and Water: A Neutron Scattering Study," *Biophys. J.* **79** (5), 2728 (2000).
- Tsai, A. M., Udovic, T. J., Neumann, D. A., "The Inverse Relationship Between Protein Dynamics and Thermal Stability," *Biophys. J.* **81**, 2339 (2001).
- Tung, C.-S., Wall, M. E., Gallagher, S. C., Trewella, J., "A Molecular Model of the Troponin C/Troponin Interaction Using Constraints From X-Ray Crystallography, NMR, Small Angle Scattering, Cross-Linking and FRET," *Protein Science* **78** (1), 2158 (2001).
- Udovic, T. J., Karmonik, C., Huang, Q., Rush, J. J., Vennström, M., Andersson, Y., Flanagan, T. B., "Comparison of the Dynamics of Hydrogen and Deuterium Dissolved in Crystalline  $Pd_3Si_2$  and  $Pd_3P_{0.8}$ ," *J. Alloy Compounds*, in press.
- Vajk, O. P., Mang, P. K., Greven, M., Gehring, P. M., Lynn, J. W., "Quantum Impurities in the Two-Dimensional Spin-1/2 Heisenberg Antiferromagnet," *Science*, in press.
- Vasiliu-Doloc, L., Osborn, R., Rosenkranz, S., Mesot, J., Mitchell, J. F., Sinha, S. K., Seeck, O. H., Lynn, J. W., Islam, Z., "Neutron and X-Ray Evidence of Charge Melting in Layered Colossal Magnetoresistance Manganites," *J. Appl. Phys.* **89** (11), 6840 (2001).
- Vasiliu-Doloc, L., Osborn, R., Rosenkranz, S., Mesot, J., Mitchell, J. F., Sinha, S. K., Seeck, O. H., Lynn, J. W., Islam, Z., "Polaron Ordering in Ferromagnetic Colossal Magnetoresistive Oxides," *Int. J. Mod. Phys. B* **14** (29), 3711 (2000).
- Wada, N., Kamitakahara, W. A., "Quasielastic and Inelastic Neutron Scattering Studies on Intercalated Water Molecules in Zeolite LTA and FAU," *Mol. Cryst. Liq. Cryst.*, in press.
- Wagner, N. J., Butera, R., "Shear Distortion and Relaxation Dynamics of Colloidal Crystals Investigated by SANS Time Slicing" *Phys. Rev. E*, in press.
- Wakimoto, S., Birgeneau, R. J., Lee, Y. S., Shirane, G., "Hole Concentration Dependence of the Magnetic Moment in Superconducting and Insulating  $La_{2-x}Sr_xCuO_4$ ," *Phys. Rev. B* **63** (17), 2501 (2001).
- Wakimoto, S., Tranquada, J. M., Ono, T., Kojima, K. M., Uchida, S., Lee, S.-H., Gehring, P. M., Birgeneau, R. J., "Diagonal Static Spin Correlations in the Low Temperature Orthorhombic Peen Phase of  $La_{1.55}Nd_{0.4}Sr_{0.05}CuO_4$ ," *Phys. Rev. B*, in press.
- Walker, L. M., Truong, M. T., "Rheology and Structural Transitions in Wormlike Micellar Systems Controlled by Added Nonionic Polymer," in *Proceedings of the XIIth International Congress on Rheology* (Cambridge, UK 2000), p.310.
- Wall, M. E., Gallagher, S. C., Trewella, J., "Large-Scale Shape Changes in Proteins and Macromolecular Complexes" *Annual Reviews of Physical Chemistry* **51**, 335 (2000).
- Wang, H., Douglas, J. F., Satija, S. K., Composto, R. J., Han, C. C., "Early-Stage Compositional Segregation in Polymer Blend Films," *Phys. Rev. Lett.*, in press.
- Wang, H. Y., Hobbie, E. K., Han, C. C., Composto, R. J., "Multiple Lateral Scales in Phase-Separating Thin Films Polymer Blends" *Langmuir*, **17**, 2857 (2001).
- Wang, H. Y., Hwang, S. R., Li, W.-H., Lee, K. C., Lynn, J. W., Luo, H. M., Ku, H. C., "Variation in the Structural and Magnetic Properties Induced by La-Doping in  $Pr(Ba_{1-x}La_x)_2Cu_3O_{7+y}$ ," *Phys. Rev. B* **62** (17), 11549 (2000).
- Weissmüller, J., Michels, A., Barker, J. G., Wiedemann, A., Pedersen, J. S., Erb, U., Shull, R. D., "Analysis of Small-Angle Neutron Scattering of Nanocrystalline Ferromagnets by a Micromagnetics Model," *Phys. Rev. B* **63** (21), 4414 (2001).
- Welp, K. A., Co, C., Wool, R. P., "Improved Reflectivity Fitting Using SERF: Spreadsheet Environment Reflectivity Fitting," *J. Neutron Res.*, in press.
- Wesley, R., Armes, S. P., Thompson, L. J., "Block Copolymer Interactions With Surfactants," *Langmuir*, in press.
- Wesley, R. D., Cosgrove, T., Thompson, L., Armes, S. P., Billingham, N., "The Structure of Hydrophilic-Hydrophobic Block Copolymers and Their Interactions With Salt and a Surfactant," in press.
- Williams, R. E., "Recent Advances in Cold Neutron Utilization at the NIST Research Reactor," *Trans. Am. Nucl. Soc.* **84**, 124 (2001).
- Williams, R. E., Rowe, J. M., "Developments in Neutron Beam Devices and an Advanced Cold Source for the NIST Research Reactor," *Physica B*, in press.
- Wirth, B. D., Odette, G. R., Pavlinich, W. A., Lucas, G. E., Spooner, S. E., "Small Angle Neutron Scattering Study of Linde 80 RPV Welds," in *Proceedings of the Effects of Radiation on Materials: 18th International Symposium*, ASTM STP 1325, edited by R. K. Nanstad, M. L. Hamilton, F. A. Garner, and A. S. Kumar (West Conshohocken, PA, 1999), p. 102.
- Wiyatno, W., Pople, J. A., Gast, A. P., Waymouth, R., Fuller, G. G., "A Scattering Study of Elastomeric Polypropylene," *Macromol.*, in press.

- Wong-Ng, W., Huang, Q., Lavin, I., Kaduk, J. A., Dillingham, J., Huagan, T., Suh, J., Cook, L. P., "Crystal Chemistry and Phase Equilibria of Selected  $\text{SrO}\text{-R}_2\text{O}_3\text{-CuO}_x$  and Related Systems, R=Lanthanides and Yttrium," *J. Solid State Chem.*, in press.
- Wong-Ng, W., Kaduk, J. A., Huang, Q., Roth, R. S., "Crystal Structure of the Monoclinic Perovskite  $\text{Sr}_{3.94}\text{Ca}_{1.31}\text{Bi}_{2.70}\text{O}_{12}$ ," *Powder Diff.* **15** (4), 227 (2000).
- Wu, W.-L., Lin, E. K., Jin, C., Wetzel, J. T. A., "A Three-Phase Model for the Structure of Porous Thin Films Determined by X-Ray Reflectivity and Small Angle Neutron Scattering," in *Proceedings of the Materials Technology, and Reliability for Advanced Interconnects and Low-k Dielectrics*, edited by K. Maex, Y.-C. Joo, G. S., Oehrlein, S. Ogawa, J. T. Wetzel (Materials Research Society, San Francisco, CA, 2001), p. 612.
- Wu, W.-L., Lin, E. K., Lin, Q., Angelopolous, M., "Small-Angle Neutron Scattering Measurements for the Characterization of Lithographically Prepared Structures," in *Proceedings of the 2000 International Conference on Characterization and Metrology for ULSI Technology*, (2000), p. 357.
- Wu, W.-L., Lin, E. K., Lin, Q., Angelopolous, M., "Small Angle Neutron Scattering Measurements of Nanoscale Lithographic Features," *J. Appl. Phys.* **88** (12), 7298 (2000).
- Wyslouzil, B. E., Wilemski, G., Strej, R., "Aerosol SANS: A New Method to Probe the Structure of Nanodroplets," in *Proceedings of Nucleation and Atmospheric Aerosols 2000*, edited by Hale, B. H., Kulmala, M., (American Institute of Physics, New York, 2000), p. 724.
- Xu, G., Broholm, C., Reich, D. H., Adams, M. A., "Triplet Waves in Quantum Spin Liquid," *Phys. Rev. Lett.*, in press.
- Xu, P., Qu, S., Rosenmayer, T., Lin, M. Y., "High-Temperature Mechanical Behavior and Phase Morphology of Poly(tetrafluoroethylene)/Siloxane Nanocomposites Used as Ultra Low-k Dielectrics," in *Proceedings of Materials, Technology, and Reliability for Advanced Interconnects and Low-k Dielectrics*, edited by K. Maex, Y.-C. Joo, G. S., Oehrlein, S. Ogawa, J. T., Wetzel (Materials Research Society, Warrendal, P. A., 2000), p. 292.
- Yamaura, K., Huang, Q., Takayama-Muromachi, E., "Crystal Structure and Magnetism of the Linear-Chain Copper Oxides  $\text{Sr}_5\text{Pb}_{3-x}\text{Bi}_x\text{CuO}_{12}$ ," *Phys. Rev. B*, in press.
- Yang, G. Y., Briber, R. M., Huang, E., Rice, P. M., Volksen, W., Miller, R. D., "Formation and Characterization of Ultra-Low Dielectric Materials Using TEM and SANS," in *Proceedings of the American Chemical Society, Polymeric Materials: Science and Engineering* **85**, 18 (2001).
- Yang, G. Y., Briber, R. M., Huang, E., Rice, P. M., Volksen, W., Miller, R. D., "Morphological Development in Nanoporous PMSSQ Films," *Chem. Mater.*, in press.
- Yang, G. Y., Briber, R. M., Huang, E., Rice, P. M., Volksen, W., Miller, R. D., "Morphology of Nanoporous PMSSQ Films," *Appl. Phys. Lett.*, in press.
- Yang, H., Al-Brithen, H., Smith, A. R., Borchers, J. A., Cappelletti, R. L., Vaudin, M. D., "Structural and Magnetic Properties of  $\eta$ -phase Manganese Nitride Films Grown by Molecular Beam Epitaxy," *App. Phys. Lett.* **78** (24), 3860 (2001).
- Yang, L., Harroun, T. A., Weiss T. M., Ding, L., Huang, H. W., "Barrel-Stave Model or Toroidal Model? A Case Study of Melittin Pores," *Biophys. J.* **81**, 1475 (2001).
- Yang, S., Mirau, P., Pai, C. S., Nalamasu, O., Reichmanis, E., Lin, E. K., Lee, H. J., Gidley, D., Frieze, W., Dull, T., Sun, J., Yee, A. F., "Design of Nanoporous Ultra Low-Dielectric Constant Organosilicates by Self-Assembly," in *Proceedings of the ACS National Meeting 2001, Polymeric Materials: Science and Engineering*, in press.
- Yang, S., Mirau, P., Pai, C. S., Nalamasu, O., Reichmanis, E., Pail, J. C., Obeng, Y. S., Seputro, J., Lin, E. K., Lee, H. J., Sun, J., Gidley, D. W., "Nanoporous Ultra Low-Dielectric Constant Organosilicates Templated by Triblock Copolymers," *Chem. Mat.*, in press.
- Yang, S., Mirau, P., Pai, C. S., Nalamasu, O., Reichmanis, E., Lin, E. K., Lee, H. J., Gidley, D. W., Sun, J., "Molecular Templating of Nanoporous Ultra Low-Dielectric-Constant (~1.5) Organosilicates by Tailoring the Microphase Separations of Triblock Copolymers," *Chem. Mat.*, in press.
- Yang, S., Pai, C. S., Nalamasu, O., Reichmanis, E., Mirau, P., Obeng, Y. S., Seputro, J., Lin, E. K., Lee, H. J., "Design of a Nanoporous Ultra Low-Dielectric Constant Organosilicate," in *Proceedings of the 7th International Conference of Polymers in Electronic Packing*, in press.
- Yang, L., Weiss, T. M., Huang, H. W., "Crystallization of Antimicrobial Pores in Membranes: Magainin and Protegrin," *Biophys J.* **79** (4), 2002 (2000).
- Yildirim, T., "Structure and Dynamics From Combined Neutron Scattering and First-Principles Studies," *Chem. Phys. Phys.* **261** (1), 205 (2000).
- Yildirim, T., Gehring, P. M., Neumann, D. A., "The Dynamics of Solid Cubane," *Neutron News* **12** (2), 18 (2001).
- Yildirim, T., Gulseren, O., "A Simple Theory of 40K Superconductivity in  $\text{MgB}_2$ ; First Principles Calculations of  $T_c$ , its Dependence in Boron Mass and Pressure," *J. Phys. Chem. Solids*, in press.
- Yildirim, T., Gulseren, O., "First-Principles Zone-Center Theory of Superconductivity in  $\text{MgB}_2$ ," *Physica A*, in press.
- Yildirim, T., Gulseren, O., Ciraci, S., "Exohydrogenated Single-Wall Carbon Nanotubes," *Phys. Rev. B* **64** (7), 5404 (2001).
- Yildirim, T., Gulseren, O., Ciraci, S., Kilic, C., "Pressure-Induced Interlinking of Carbon Nanotubes," *Phys. Rev. B* **62** (19), 12648 (2000).
- Yildirim, T., Gulseren, O., Lynn, J. W., Brown, C. M., Udoovic, T. J., Huang, Q. Z., Rogado, N., Regan, K. A., Slusky, J. S., He, T., Haas, M. K., Khalifah, P., Inumaru, K., Cava, R. J., "Giant Anharmonicity and Non-Linear Electron-Phonon Coupling in  $\text{MgB}_2$ ; Combined First-Principles Calculations and Neutron Scattering Study," *Phys. Rev. Lett.* **87** (3), 7001 (2001).
- Yildirim, T., Reisner, B., Udoovic, T. J., Neumann, D. A., "The Combined Neutron Scattering and First-Principles Study of Solid State Protonic Conductors," *Solid State Ionics*, **145**, 429 (2001).
- Yong, G., Toulouse, J., Erwin R., Shapiro, S. M., Hennion, B., "Pretransitional Diffuse Neutron Scattering in the Mixed Perovskite Relaxor  $\text{K}_{1-x}\text{Li}_x\text{TaO}_3$ ," *Phys. Rev. B* **62** (22), 14736 (2000).
- Young, S. K., Trevino, S. F., Beck Tan, N. C., "Small Angle Neutron Scattering Investigation of Structural Changes in Nafion Membranes Induced by Swelling with Various Solvents," *J. Polym. Sci. Part B: Polym. Phys.* in press.

- Young, S. K., Trevino, S. F., Beck Tan, N. C., Paul, R. L., "Utilization of Prompt Gamma Neutron Activation Analysis in the Evaluation of Various Counterion Nafion Membranes," *J. Polym. Sci. Part B: Polym. Phys.*, in press.
- Yun, S. I., Briber, R. M., Kee, R. A., Gauthier, M., "Small Angle Neutron Scattering of Arborecent Graft Poly(styrene)-Poly(2-vinylpyridine) Polymers," in *Proceedings of the American Chemical Society, Polymeric Materials: Science and Engineering* **85**, 224 (2001).
- Zaliznyak, I. A., Hill, J. P., Tranquada, J. M., Erwin, R., Moritomo, Y., "Independent Freezing of Charge and Spin Dynamics in  $\text{La}_{1.5}\text{Sr}_{0.5}\text{CoO}_4$ ," *Phys. Rev. Lett.* **85** (20), 4353 (2000).
- Zaliznyak, I. A., Lee, S.-H., Petrov, S. V., "Continuum in the Spin Excitation Spectrum of a Haldane Chain, Observed by Neutron Scattering in  $\text{CsNiCl}_3$ ," *Phys. Rev. Lett.* **87** (1), 7202 (2001).
- Zamlynny, V., Burgess, I., Szymanski, G., Lipkowski, J., Majewski, J., Smith, G., Satija, S., Ivkov, R., "Electrochemical and Neutron Reflectivity Studies of Spontaneously Formed Amphiphilic Surfactant Bilayers at the Gold-Solution Interface," *Langmuir* **16** (25), 9861 (2000).
- Zeisler, R., Jenks, P., "Proper Usage of Reference Materials," in *Proceedings of the Reference Materials for Chemical Analysis – Certification, Availability, and Proper Usage*, edited by M. Stoeppler, W. R. Wolf, P. Jenks (Wiley-VCH Verlag Chemie, Weinheim, Germany, 2001), p. 236.
- Zeisler, R., Lamaze, G. P., Chen-Mayer, H. H., "Coincidence and Anti-Coincidence Measurements in Prompt Gamma Neutron Activation Analysis With Pulsed Cold Neutron Beams," *J. Radioanal. Nucl. Ch.* **248** (1), 35 (2001).
- Zeissler, C. J., Lindstrom, R. M., McKinley, J. P., "Radioactive Particle Analysis by Digital Autoradiography," *J. Radioanal. Nucl. Chem.* **248**, 407 (2001).
- Zhang, Y., Douglas, J. F., Ermi, B. D., Amis, E. J., "Influence of Counterion Valency on the Scattering Properties of Highly Charged Polyelectrolyte Solutions," *J. Chem. Phys.* **114** (7), 3299 (2001).
- Zhang, Y. M., Ge, S., Tang, B., Rafailovich, M. H., Sokolov, J. C., Peiffer, D. G., Li, Z., Dias, A. J., McElrath, K. O., Satija, S. K., Lin, M. Y., Nguyen, D., "Reduced Mobility of Elastomers Near A Solid Surface as Measured by Neutron Reflectometry," *Langmuir* **17** (14), 4437 (2001).
- Zhang, Y., Ge, S., Tang, B., Rafailovich, M. H., Sokolov, J., Peiffer, D., Li, Z., Lin, M., Dias, J. A., McElrath, K. O., Nguyen, D., Satija, S., Schwarz, S. A., "Interfacial Properties of Brominated Isobutylene-co-p-Methylstyrene and Butadiene Polymers," in *Proceedings of the American Chemical Society 154th Rubber Conference*, in press.
- Zhang, Y., Ge, S., Tang, B., Koga, T., Rafailovich, M. H., Sokolov, J. C., Peiffer, D. G., Li, Z., Dias, A. J., McElrath, K. O., Lin, M. Y., Satija, S. K., Urquhart, S. G., Ade, H., Nguyen, D., "Effect of Carbon Black and Silica Fillers in Elastomer Blends," *Macromol.* **34**, 7056 (2001).
- Zhang, Y., Ge, S., Tang, B., Rafailovich, M. H., Sokolov, J. C., Peiffer, D. G., Li, Z., Dias, A. J., McElrath, K. O., Satija, S. K., Lin, M. Y., Nguyen, D., "Reduced Mobility of Elastomers Near a Solid Surface as Measured by Neutron Reflectometry," *Langmuir* **17**, 4437 (2001).
- Zhang, Y., Li, W., Tang, B., Ge, S., Hu, X., Rafailovich, M. H., Sokolov, J. C., Gersappe, D., Peiffer, D. G., Li, Z., Dias, A. J., McElrath, K. O., Lin, M. Y., Satija, S. K., Urquhart, S. G., Ade, H., "Interfacial Properties of Elastomer Blends as Studied by Neutron Reflectivity," *Polymer* **42**, 9133 (2001).
- Zhang, Y., Rafailovich, M. H., Sokolov, J. C., Lin, M. Y., Peiffer, D. G., "Interfacial and Nanostructural Studies of Polymer Blends," in *Proceedings 8<sup>th</sup> Asia Pacific Physics Conference*, edited by Y. D., Yao, H.-Y. Cheng, C.-S., Chang, Lee, S. F., (World Scientific, Singapore, 2001), p. 292.
- Zheludev, A., Chen, Y., Broholm, C. L., Honda, Z., Katsumata, K., "Haldane-Gap Excitations in the Low-H-c One-Dimensional Quantum Antiferromagnet  $\text{Ni}(\text{C}_5\text{D}_{14}\text{N}_2)_2\text{N}-3(\text{PF}_6)$ ," *Phys. Rev. B* **63** (10), 4410 (2001).
- Zheludev, A., Honda, Z., Chen, Y., Broholm, C. L., Katsumata, K., Shapiro, S. M., "Gapless Excitations in the High-Field Phase of a Haldane Antiferromagnet," *Phys. Rev. Lett.*, in press.
- Zheludev, A., Maslov, S., Zaliznyak, I., Regnault, L. P., Masuda, T., Uchinokura, K., Erwin, R., Shirane, G., "Experimental Evidence for Shekhtman-Entin-Wohlmanner-Aharony (SEA) Interactions in  $\text{Ba}_2\text{CuGe}_2\text{O}_7$ ," *Phys. Rev. B*, in press.
- Zheludev, A., Masuda, T., Tsukada, I., Uchiyama, Y., Uchinokura, K., Boni, P., Lee, S.-H., "Magnetic Excitations in Coupled Haldane Spin Chains Near the Quantum Critical Point," *Phys. Rev. B* **62** (13), 8921 (2000).
- Zhokhov, A. A., Emelchenko, G. A., Naumenko, I. G., Barilo, S. N., Khasanov, S. S., Zverkov, S. A., Lynn, J. W., "Growth of Large  $\text{PrBa}_2\text{Cu}_3\text{O}_{7-\delta}$  Single Crystals by Modified TSSG Method Using Zirconium Dioxide Crucibles," *J. Cryst. Growth* **219** (4), 385 (2000).
- Zhou, C., Hobbie, E. K., Bauer, B. J., Han, C. C., "Equilibrium Structure of Hydrogen-Bonded Polymer Blends," *J. Polym. Sci. Part B: Polym. Phys.*, in press.
- Zimmerman, M. H., Baskin, D. M., Faber, K. T., Fuller, E. R., Allen, A. J., Keane, D. T., "Fracture of Textured Iron Titanate," *Acta Mater.* **49**, 3231 (2001).
- Zimmerman, M. V., "X-Ray Scattering Studies of Orbital and Charge Ordering in  $\text{Pr}_{1-x}\text{Ca}_x\text{MnO}_3$ ," *Phys. Rev. B*, in press.

